

INDEX ON PAGE 22

BUSINESS WEEK



A McGRAW-HILL PUBLICATION

OCT. 31, 1953

THERE'S A TOUCH OF TENNESSEE IN MODERN CASTINGS



TENNESSEE's famous Diamond "D" pig iron is used from coast to coast in the production of special castings in which unusual strength and elasticity are required. It is low in phosphorus, manganese and sulphur, high in carbon and is machine cast.

Diamond "D" pig iron is recommended for the production of "Ductile" or "Nodular" iron castings as well as White Iron and electric and acid furnace steel castings.

TENNESSEE also ships Ferromanganese and Ferrosilicon in briquettes and lump form to foundries throughout the nation. These and many other essential ingredients have won for TENNESSEE the name of an industry serving all industry.



TENNESSEE
PRODUCTS & CHEMICAL
Corporation
NASHVILLE, TENNESSEE,

Producers of: FUELS • METALLURGICAL PRODUCTS • TENSULATE BUILDING PRODUCTS • AROMATIC CHEMICALS WOOD CHEMICALS • AGRICULTURAL CHEMICALS

RESEARCH KEEPS

B.F. Goodrich

FIRST IN RUBBER



Fish float through the hose —a ton a minute

A typical example of B. F. Goodrich improvement in rubber

THIS is how sardines start on their journey to the sandwiches of the world. Fishermen used to haul the heavy nets over the side by hand and shovel the fish into the boat. That took time and heavy work, and damaged a lot of fish.

One New England canner looked for a way to get his catch back to the docks faster, fresher and without waste. He wondered if fish could be taken aboard by hose, as petroleum is.

B. F. Goodrich studied the problem

and suggested a flexible suction hose that's light yet won't collapse. Lined with soft rubber, it allows a bruise-free passage of the thin-skinned sardines, who literally "float" as the water carries them aboard at a ton-a-minute clip. So the fish now reach the cannery fresher, in better condition and boats can make more runs out to sea in a season. More fish—more trips—more profit for the canner!

For moving materials from here to there—whether fish, coal, oil, ore, car-

tons or whatever—B. F. Goodrich has developed hose and conveyor belts of many types to do jobs better, faster and often far cheaper. It will pay you to check with B. F. Goodrich before being satisfied with any product or process involving rubber. Just call your local BFG distributor, or write *The B. F. Goodrich Company, Dept. M-118, Akron 18, Ohio.*

B.F. Goodrich
INDUSTRIAL PRODUCTS
DIVISION



5 times the mileage between overhauls ...with Ni-Resist

Nickel Alloyed Metal Known as "NI-RESIST" used for
Ring Carriers Metallurgically Bonded to Aluminum Pistons by
Al-Fin Process of Fairchild Engine and Airplane Corporation

RESISTANT TO heat, corrosion and metal-to-metal wear . . . Ni-Resist® is helping truck fleet operators to increase mileage between overhauls from two to five times.

With Ni-Resist armored aluminum pistons, operators keep their expensive rigs rolling with minimum lost time due to road failures and shop repairs.

Records show remarkable advantages attained in thousands of other applications by the use of Ni-Resist. In fact, this nickel alloy has proved

to be one of industry's most economical materials . . . because no other cast metal provides such a useful combination of engineering properties.

Whatever your industry, let us help you solve your metal problems. Make use of counsel and data based on years of specialized experience in the treatment, fabrication properties and performance of alloys containing nickel. Write us today . . . send details of your problem for our suggestions.



After serving 199,000 miles . . . user reports "no appreciable wear" in Ni-Resist armored pistons used in Buda Model 844 heavy duty engine. This user, operating 738 Diesel trucks for freight service in mountainous territory, expects considerably more mileage before replacing pistons of this type.

After 41,078 miles . . . the top ring groove failed in this conventional-type piston. Records show the distinct improvements attained by use of Ni-Resist ring bands which become an integral part of pistons when bonded to the aluminum alloy by the Al-Fin process, developed by FAIRCHILD ENGINE AND AIRPLANE CORPORATION, Farmingdale, New York.



INCO

THE INTERNATIONAL NICKEL COMPANY, INC. 67 Wall Street
New York 5, N.Y.

BUSINESS WEEK

EDITOR & PUBLISHER Elliott V. Bell
MANAGING EDITOR Edgar A. Grunwald
EXECUTIVE EDITOR Kenneth Kramer

ASSISTANT MANAGING EDITOR Robert B. Colborn
ASSOCIATE MANAGING EDITOR John L. Cobbs
ASSOCIATE MANAGING EDITOR Peter French

DEPARTMENTS

Business Outlook: Clark R. Pace, *Editor*
Commodities: Gertrude Charloff, *Editor*
Finance: William McKee Gillingham, *Editor*; Paul D. Gesner
Foreign: Howard Whidden, *Editor*; Paul R. Miller, Jr., John R. Thomas
Industrial Production: Charles M. Garvey, *Editor*; George J. Gray, Jr.
Labor: Merlin S. Pitzele, *Editor*; Edward T. Townsend, Caroline Adams
Management: Richard L. Waddell, *Editor*; Richard M. Wight
Marketing: Carl Rieser, *Editor*; Cora Carter
Personal Business: Guy Shipley, Jr., *Editor*
Regions: Richard M. Machol, *Editor*
Research: John K. Fockler, *Editor*
Illustration: Harry Jensen, Kate McSweeney, *Editors*; Richard A. Wolters (*Pictures-Photography*), Robert Isar, Herbert F. Kratovil, Jonary Mosley, Arthur Richter
Special Projects: Frank J. Fogarty
Statistics: Elsa Denno
The Trend: M. J. Rossant
Library: Dorothy Roanree, *Librarian*; Emily Cherry, Ruth Callanan
Assistant to the Editor & Publisher: John F. Hartshorne

NEWS EDITORS

Marilyn T. Benjamin, T. B. Crane, Robert F. Deed, Maxwell D. Gunther, Doris I. White

EDITORIAL ASSISTANTS

Edward J. Burgess, Jr., Mary M. Burgess, David B. Carlson, Marguerite G. Cronin, D. A. Drennen, Jean Drummond, Alice Marks, Dorothea Schmidt

ECONOMICS STAFF

Dexter M. Keezer, *Director*; Peter J. Davies, Richard Everett, Howard C. Gary, Douglas Greenwald, Margaret Matulis, Robert P. Ulin

DOMESTIC NEWS SERVICE

Chicago Bureau: James M. Sutherland, *Manager*; Mary B. Stephenson, Dorothy Miller
Cleveland Bureau: Robert E. Cochran, *Manager*; Jean H. Henderson
Detroit Bureau: William Kroger, *Manager*
Houston Bureau: Eugene Miller, *Manager*
Los Angeles Bureau: Thomas M. Self, *Manager*
Philadelphia Bureau: W. B. Whichard, Jr., *Manager*
Pittsburgh Bureau: Richard N. Larkin, *Manager*
San Francisco Bureau: Richard Lamb, *Manager*; Joanne O'Brien

Washington Bureau: George B. Bryant, Jr., *Manager*; Glen Bayless, Carter Field, Jay Flocken, Boyd France, Joseph Gambatese, Sam Justice, William H. Kearns, Craig Lewis, Donald O. Loomis, Jesse Mock, Gladys Montgomery, Arthur L. Moore, E. William Olcott, Morton A. Reichek, Caroline Robertson, Vincent Smith.

Correspondents: Akron, Albany, Atlanta, Austin, Baltimore, Birmingham, Boston, Buffalo, Charleston, Charlotte, Cincinnati, Columbus, Dallas, Denver, Des Moines, Duluth, Fort Worth, Greensboro, Hartford, Jacksonville, Kansas City, Knoxville, Little Rock, Memphis, Milwaukee, Minneapolis, Nashville, New Orleans, Oklahoma City, Orono, Philadelphia, Phoenix, Portland, (Ore.), Providence, Richmond, Rochester, Salt Lake City, San Antonio, San Diego, Seattle, St. Louis, Syracuse, Toledo, Wilmington, Worcester, Honolulu.

FOREIGN NEWS SERVICE

Editor: Joseph K. Van Denburg, Jr.

Frankfurt: Gerald W. Schroder

London: Nathaniel McKitterick

Manila: Herbert Leopold

Correspondents: Amsterdam, Athens, Bangkok, Beirut, Belgrade, Bogota, Bombay, Brussels, Buenos Aires, Cairo, Caracas, Ciudad Trujillo, Copenhagen, Djakarta, Durban, Geneva, Guatemala City, Havana, Helsinki, Istanbul, Johannesburg, Karachi, La Paz, Lima, Madrid, Melbourne, Oslo, Ottawa, Panama City, Quito, Reykjavik, Rome, Salzburg, San Juan, San Salvador, Santiago, Stockholm, Sydney, Tehran, Tel Aviv, Wellington, Winnipeg.

ADVERTISING & BUSINESS MANAGER Herman C. Sturm

BUSINESS WEEK • OCT. 31 • NUMBER 1261

(with which are combined The Annalist and the Magazine of Business) Published weekly by McGraw-Hill Publishing Company, Inc., James H. McGraw, Founder. **Publication Office:** 99-123 North Broadway, Albany, N. Y. **Subscription Offices:** 330 West 42nd St., New York 36. **General Vice-President and Treasurer:** Donald C. McGraw, President: Willard Chevalier, Executive Vice-President: James A. Gerstel, Vice-President and Treasurer: John J. Cooke, Secretary: Paul Montgomery, Senior Vice-President and Publication Director: Ralph B. Smith, Vice-President and Editorial Director: Wilson Bond, Vice-President and Director of Advertising. **Subscriptions:** Address correspondence regarding subscriptions to J. E. Blackburn, Jr., Vice-

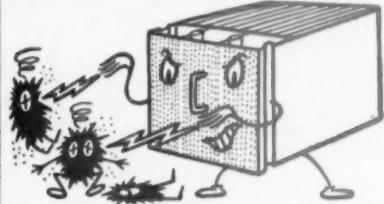
President and Director of Circulation, *Business Week*, 99-123 N. Broadway, Albany 1, N. Y., or month for change of address. Subscriptions to *Business Week* are solicited only from persons engaged in business or industry. **Position and company connection must be indicated on subscription orders.** Single copy, 50¢. **Subscription rates—United States and possessions:** \$6.00 a year; \$12.00 for three years. **Canada** \$7.00 a year; \$14.00 for three years. **Other Western Hemisphere countries** \$10.00 a year; \$20.00 for three years. **Other countries** \$25 a year; \$50.00 for three years. **Entered as second class matter Dec. 4, 1936, at Post Office at Albany, N. Y., under Act of Mar. 3, 1879.** • Printed in U. S. A. Copyright 1953 by McGraw-Hill Publishing Co., Inc.—All Rights Reserved.

AIR-MAZING FACTS

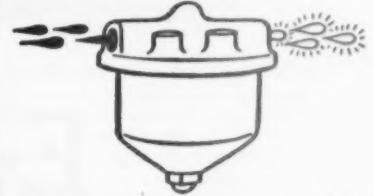
BY O. SOGLOW



MUSTACHES A MUST FOR STONE MASONs. Back in 1853 a Scotch doctor gave stone masons a rather unusual prescription: grow mustaches. He believed that the mustaches would act as natural filters, keeping harmful stone dust out of their lungs.



ELECTROCUTES DUST! More than 90% of all air-borne dust, pollen and even smoke particles are literally shocked out of the air by Electromaze electronic air filters. Used wherever super-clean air is desired, Electromaze filter installations are more flexible in size, quicker to install and easier to clean.



KEEPS OIL SPIC AND SPAN. Air-Maze liquid filters remove abrasive particles from engine lubricants, fuels and hydraulic fluids. "Disc" construction provides many times more net effective filter area than other types of permanent filters. All-metal construction. Like new after cleaning.

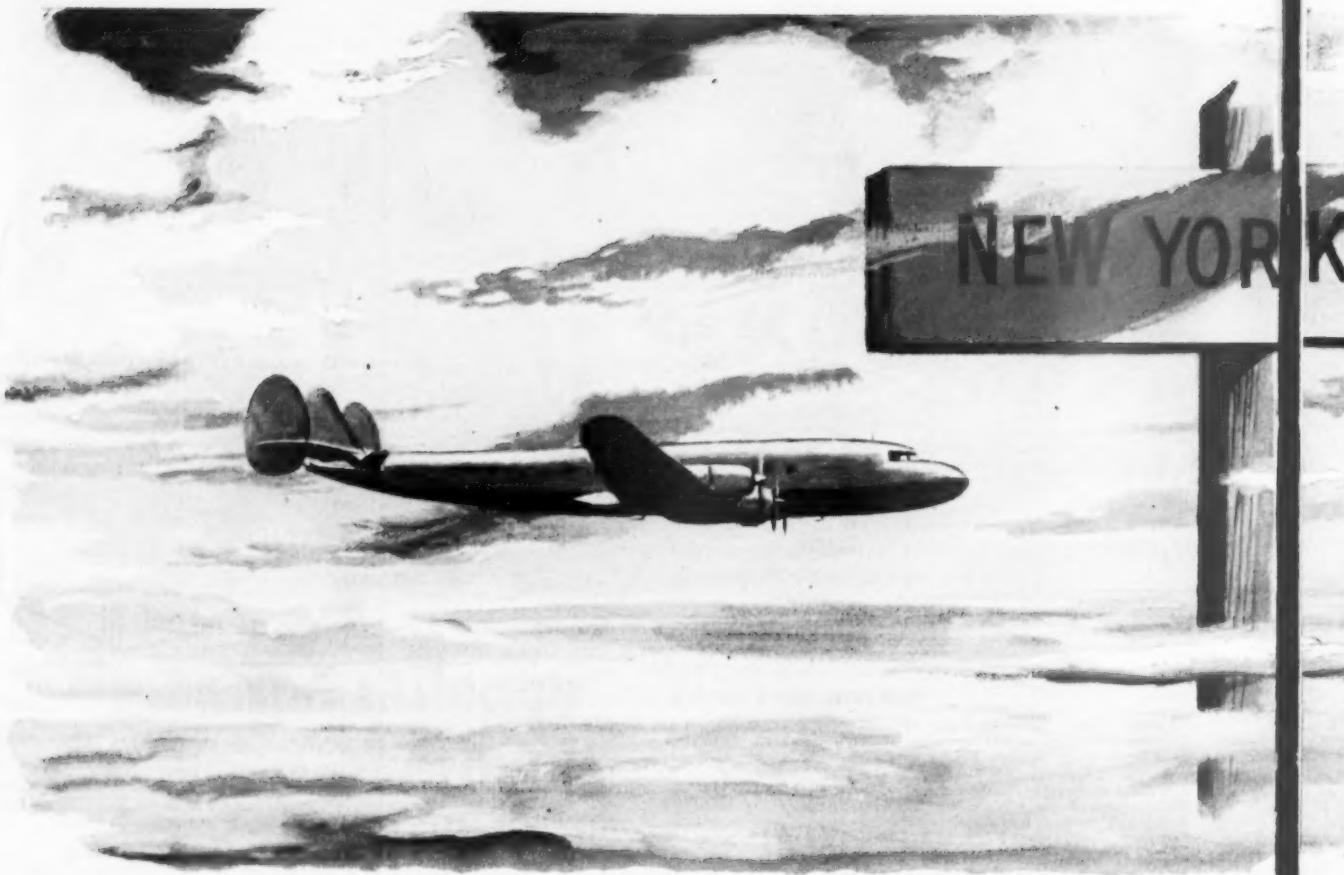
WHETHER YOU BUILD OR USE engines, compressors, air-conditioning and ventilating equipment, or any device using air or liquids—the chances are there is an Air-Maze filter engineered to serve you better. Representatives in all principal cities. For condensed product catalog, write Air-Maze Corporation, Dept. C, 25000 Miles Road, Cleveland 28, Ohio.

AIR-MAZE

The Filter Engineers

AIR FILTERS
SILENCERS
SPARK ARRESTERS

LIQUID FILTERS
OIL SEPARATORS
GREASE FILTERS



Ever see a Milepost in the

Wherever planes fly, Bendix devices contribute to their efficient operation. The human pilot's task is eased by Automatic Pilots which fly planes accurately; by "Glide Path" Controls and GCA (radar) that help him land in bad weather; by Omni-Mag that points his course; by Radio for instant ground communications and by scores of other products that make flying safer and more economical.

Newest member of the family is Bendix DME-distance measuring equipment that constantly indicates how many miles the plane is from its airport. Especially valuable in adverse weather, DME helps pilots immeasurably, elim-*

inates "estimating", increases the safety factor, effects operational savings.

Though we design and manufacture hundreds of products for the aviation and automobile industries, Bendix Aviation Corporation must be classified also under a score or more of other type business categories, some of which can be gleaned from the partial listing of divisions and products at the right.

The nature of Bendix is what might be called planned diversity. Our forte is an abundance of technical talent—an engineering and research staff of over 6000—coupled with a 25-division manufacturing organization experienced in



the Sky?

both large volume, low-cost production and small quantity items of great complexity used by nearly every industrial field and branch of industrial science.

Hence, it is reasonable to assume that **Bendix** is equipped to contribute to some phase of *your* operation. Who knows—perhaps the problem bothering you today was solved by some of our men yesterday!

FIND OUT HOW BENDIX CAN HELP YOUR BUSINESS

The complete story of Bendix is best told and illustrated in an interesting new digest called "Bendix and Your Business." You are almost certain to find in its pages at least one idea of how Bendix can help improve some part of your own business. Please make requests for this 40-page booklet on your company letter-head to **BENDIX AVIATION CORPORATION • FISHER BLDG., DETROIT 2, MICH.**



PRINCIPAL DIVISIONS AND BASIC PRODUCTS

BENDIX RADIO, TOWSON, MD.

radar; auto, railroad, mobile and aviation radio; television.

*PRODUCER OF DME

-PRODUCER OF DRE

ECLIPSE MACHINE, ELMIRA, N. Y.
Stromberg® carburetors, electric fuel pumps,
starter drives, coaster brakes.

MARSHALL-ECLIPSE, TROY, N. Y.

brake blocks, brake lining.
ECLIPSE-PIONEER, TETERBORO, N. J.

BENDIX FRIEZ, TOWSON, MD.

weather instruments.

SCINTILLA-MAGNETO, SIDNEY, N.

aviation ignition systems; small engines

*magnetos; diesel fuel injection;
electrical connectors.*

RED BANK, EATONTOWN, N. J.
electronic tubes; dynamotors, inverters.

*automotive, marine and small
engine carburetors.*

BENDIX-SKINNER, DETROIT, MICH.
micronic filters.
PACIFIC, NORTH HOLLYWOOD, CALIF.
telemetry equipment; hydraulic and
electric actuators; depth recorders;
boat steers.

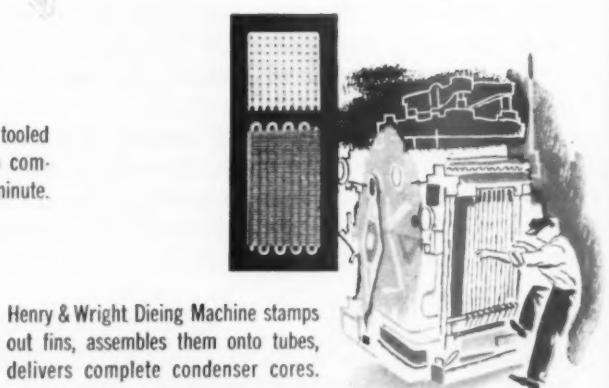
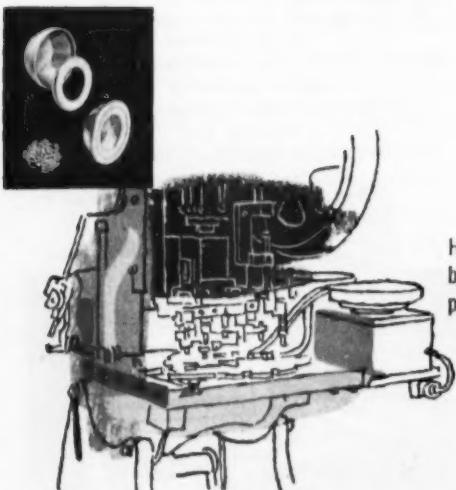
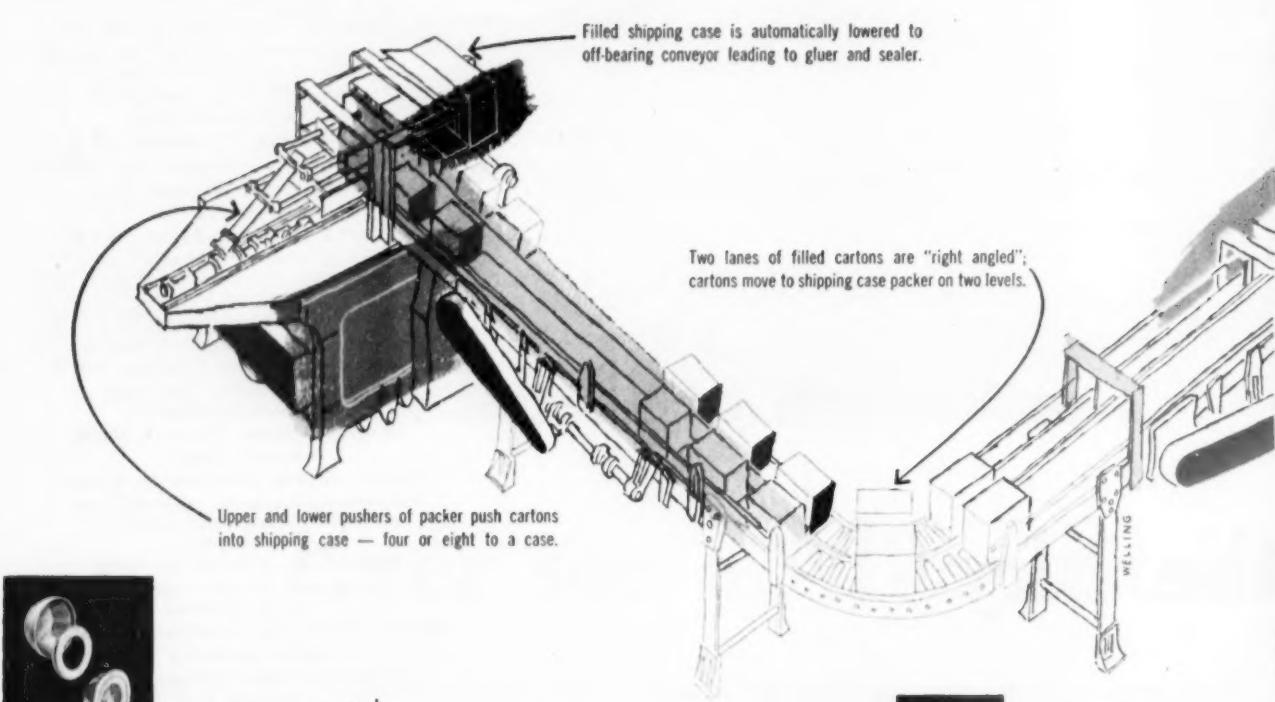
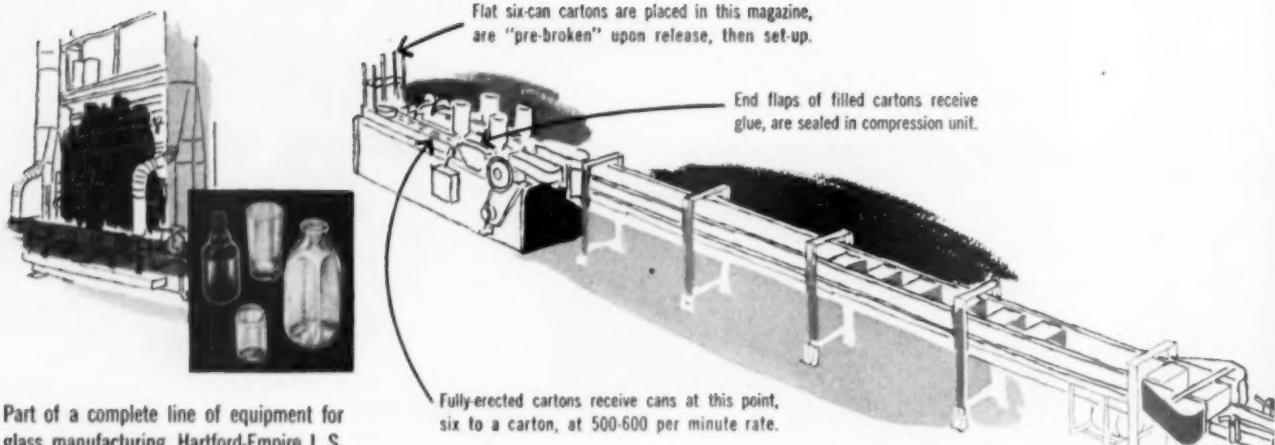
CINCINNATI, CINCINNATI, OHIO
automatic viscosity regulators.

nuclear products.
BENDIX COMPUTER, HAWTHORNE, CALIF.

digital computers.
BENDIX-ECLIPSE OF CANADA, LTD.

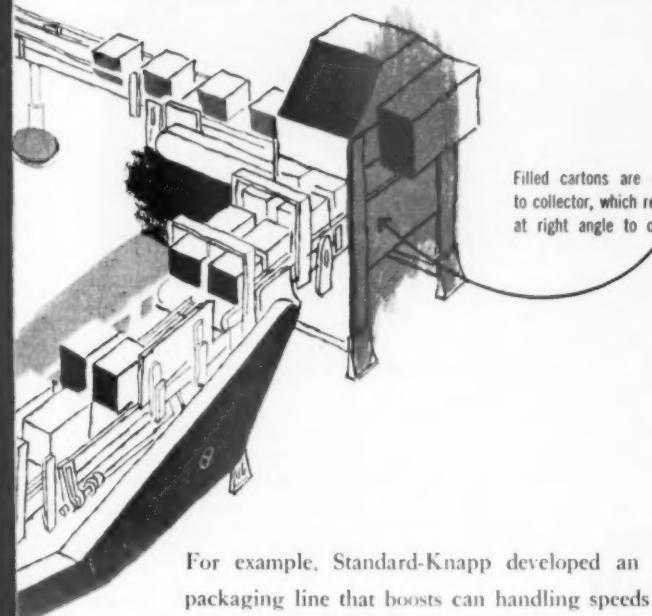
Windsor, Ont.
BENDIX INTERNATIONAL





before voting yes or no on new products

*check the new production and packaging
methods available through Emhart companies*



Filled cartons are conveyed single file to collector, which releases them in two's at right angle to original line of flow.

For example, Standard-Knapp developed an automatic packaging line that boosts can handling speeds from 320 per minute to 500-600 per minute. This new equipment enables brewers to meet rising demand with increased output and simultaneously achieve appreciable reductions in operating costs.

All Emhart divisions offer equal talents for improving techniques. V & O builds and tools power presses that combine tricky assembly jobs into low cost, automated operations. Metal stampings — in both light and heavy gauges — drop radically in cost when produced on high speed Henry & Wright Dicing Machines. If you make glass products, Hartford-Empire can provide complete equipment and services for improved methods.

Emhart Mfg. Co.

Only the best is good enough

NEW LITERATURE

Check any product information you want and mail this coupon to any Emhart unit listed below . . .

HENRY & WRIGHT


Division of
Emhart Mfg. Co.
510 Windsor Street
HARTFORD 5, CONN.

HARTFORD-EMPIRE CO.


Division of
Emhart Mfg. Co.
HARTFORD 2, CONN.

THE V & O PRESS CO


Division of
Emhart Mfg. Co.
400 Union Turnpike
HUDSON, NEW YORK

STANDARD - KNAPP


Division of
Emhart Mfg. Co.
PORTLAND, CONN.

GENERAL

Pictorial Review of Major
Emhart Products

GLASS

- | | |
|---|---|
| <input type="checkbox"/> Batch Chargers | <input type="checkbox"/> Forming Machines |
| <input type="checkbox"/> Feeders | <input type="checkbox"/> Lehr Loaders |
| <input type="checkbox"/> Lehrs | <input type="checkbox"/> Unit Melters |

PACKAGING MACHINES

- | | |
|---|---|
| <input type="checkbox"/> Unloaders | <input type="checkbox"/> Packers |
| <input type="checkbox"/> Rinsers | <input type="checkbox"/> Labelers |
| <input type="checkbox"/> Cartoners | <input type="checkbox"/> Case Cleaners |
| <input type="checkbox"/> Gluers & Sealers | <input type="checkbox"/> Palletizers & De-palletizers |

METAL WORKING

- | |
|---|
| <input type="checkbox"/> Henry & Wright Dieing Machines |
| <input type="checkbox"/> Henry & Wright "Press Load Calculations" |
| <input type="checkbox"/> Henry & Wright Case Histories |
| <input type="checkbox"/> V & O Inclinable Presses |
| <input type="checkbox"/> V & O Notching Presses |
| <input type="checkbox"/> V & O Roll and Dial Feeds |
| <input type="checkbox"/> V & O Feed-O-Matic |

NAME _____

TITLE _____

COMPANY _____

ADDRESS _____

CITY & STATE _____

READERS REPORT

Legal Advice . . . in Time

Dear Sir:

We wish to take this opportunity . . . to congratulate you on the article appearing in your Oct. 3 issue, page 183, dealing with the use of lawyers in business transactions.

We are not of the opinion that these were excellent articles merely because they might incidentally bring some business into our office, but sincerely feel that the public, for one reason or another, so often only consults an attorney after they find themselves in difficulty, and we believe that the article . . . will help educate people to see their attorney in time to help them avoid any future difficulties.

Because of the ethics of our profession we are necessarily prevented from soliciting business, but nevertheless do feel as if the public should be so advised as to the practice of lawyers as to make the proper use of them. . . .

DALE F. RUEDIG, JR

HANLON & RUEDIG
GALESBURG, ILL.

Indiana Has It, Too

Dear Sir:

Your discussion of state taxes on page 183 of your October 10 issue says that Indiana has no personal income tax.

May I draw your attention to the Indiana gross income tax, which levies a tax on personal income earned within Indiana by nonresidents.

WATSON M. KOONTZ
CERTIFIED PUBLIC ACCOUNTANT
SOUTH BEND, IND.

The Case against Windows

Dear Sir:

We have noted in the August 29 issue of BUSINESS WEEK, page 10, comments by Franklyn R. Hawkins . . . regarding windowless structures, which we do not find altogether convincing.

In addition to the 10% reduction in total construction costs [BW—Aug. 8 '53, p72], windowless structures have several other advantages. They provide greater freedom of architectural space allocation, since space orientation problems with regard to the exterior are eliminated. Disturbing street noises in downtown locations are nonexistent in windowless buildings. Engineers have greater freedom of structural design, because they do not have to be concerned with spandrel beam depths or exterior column locations in multistory buildings. Windowless structures are more readily adapted to wall bearing structural design, which in itself is inherently less expensive than skeleton frame con-

PRESENTING A GREAT NEW CONCEPT IN FORK LIFT TRUCK OPERATION...

TOWMOTOR
Towmotorque
DRIVE

✓ HYDRAULICALLY CONTROLLED POWER

✓ NO GEAR SHIFTING OR CLUTCHING DELAYS

✓ EFFORTLESS DRIVER CONTROL

From the first name in Mass Handling Equipment comes the last word in torque drives for fork lift truck applications. Here is a product of intensive research and engineering, truly a trouble-free torque converter drive . . . available to match the capacity range of all Towmotor power plants. Here is the one drive that adds still more to superior Towmotor performance. For the complete story in a nutshell, send for book on Towmotorque now.

 Send for this
Free book now!

TOWMOTOR CORPORATION,
Div. 210A, 1226 E. 152nd St.,
Cleveland 10, Ohio

TOWMOTOR ENGINEERED FOR QUALITY PERFORMANCE





SAVES TIME REPAIRING FOUNDRY PATTERNS

ANOTHER EXAMPLE

of KELLER Air Tools engineered to industry

The problem of maintaining foundry patterns and core boxes has its counterpart in many other industries. Tools which save labor time for such work, and reduce out-of-service time, naturally receive quick attention from industrial executives once they learn about them.

Such a tool is the Keller Die Grinder shown above dressing a foundry pattern. It saves one third the labor time because it is so much lighter and easier to handle than other tools, and because its high speed permits fast cutting with the small grinding wheels which must be used

where space is limited.

Keller Air Tools are saving time, reducing costs, and making work easier in thousands of industrial plants. When a problem arises which cannot be met by a standard Keller Air Tool —either as it is or as it may be adapted—Keller design engineers have the knowledge and experience to devise equipment for special requirements. Call a Keller representative.



DRILLS • SCREW DRIVERS • NUT SETTERS • GRINDERS • RIVETERS
AIR MOTORS • AIR HOISTS • AIRFEEDRILLS

KELLER TOOL COMPANY, GRAND HAVEN, MICH.

IT'S WHEELING EXPANDED METAL

SOLID STEEL ... PIERCED ... AND STRETCHED



SCREENS OF SOLID STEEL YOU CAN SEE THROUGH!

Not woven, not welded. Wheeling ExM is solid steel, pierced and s-t-r-e-t-c-h-e-d. The resulting metal, stronger than solid steel its own weight, gives free passage to heat, light, sound and air. And it's as decorative as it is practical. Write today for complete data.

Furniture and Screens by John B. Salterini Co., Inc., N. Y.



WHEELING CORRUGATING COMPANY WHEELING, WEST VIRGINIA

ATLANTA BOSTON BUFFALO CHICAGO COLUMBUS DETROIT
HOUSTON KANSAS CITY LOUISVILLE MINNEAPOLIS NEW ORLEANS
NEW YORK PHILADELPHIA RICHMOND ST. LOUIS

struction for buildings up to four floors in height. Greater uniformity of light intensity is obtained by artificial lighting. The illumination costs may be slightly greater, but the over-all electrical power, water, and fuel consumption is considerably reduced through smaller loads on the heating and cooling equipment. Heat loss and heat gain is considerably less in buildings without windows. Heat gain through unshaded common window glass may be more than 4,200% greater than the heat gain through a light colored 8" brick wall. Expensive sun control devices to which architects frequently resort in order to reduce the tremendous heat gain through glass can also be eliminated. Federal Civil Defense Administration recognizes that windowless structures are more blast resistant and provide greater protection in case of enemy attack. . . .

Further study would undoubtedly reveal many other advantages in windowless structures. . . .

I do not believe that the normal American is as subject to attacks of claustrophobia as Hawkins would have us believe. He refers to "definite proof that workers do not like" such buildings, but fails to provide that proof. Personal interview surveys made by owners of windowless structures have indicated, quite to the contrary, that there is no such feeling among workers who are presently employed in them.

CLAYFORD T. GRIMM
EXECUTIVE SECRETARY
CLAY PRODUCTS ASSN. OF THE SOUTHWEST
AUSTIN, TEX.

Apropos of Nothing

Dear Sir:

On page 200 of the October 3 issue of BUSINESS WEEK, you look forward to the purchase of silence from a slot machine.

As early as 1944, juke boxes in Rochester taverns had a "5-Minutes of Silence" choice for a nickel.

The making of Nothing into a salable commodity caused endless discussion in the economics classes at the Rochester Institute of Technology. . . .

W. YENGST
ROCHESTER, N. Y.

Dear Sir:

Several members of National Automatic Merchandising Association have sent us a clipping entitled What This Country Needs . . . [BW—Oct. 3 '53, p200].

For many years this association . . . has attempted to clarify the terminology used by the press in describing our industry. Actually . . . any machine which carries a slot for insertion of a coin to become operative can be referred to as



NOW GOOD MEDICINE comes in small packages

KNOW why so many powders, tablets and other hygroscopic products are now being marketed in moisture-resistant PLIOFILM laminated packets?

PLIOFILM is unique in that it can be heat-sealed at a wide range of temperatures. It forms a tough, lasting air-tight weld that's as strong and secure as the package itself.

The result is a more economical package, and a handier one for consumers. It's a package that keeps the contents free of unwanted air

and moisture, protecting quality far longer.

PLIOFILM is nontoxic, doesn't wrinkle. It can be laminated to paper, foils, other types of film, or to itself, or used as a single film. It takes printing beautifully.

If you're packaging pharmaceuticals—or any moisture-sensitive product—why not talk to the Goodyear Packaging Engineer. He'll help you design a PLIOFILM wrap that's tailor-made for your product. Write him at Goodyear, Pliofilm Dept. J-6410A, Akron 16, Ohio.



Good things
are better in

Pliofilm

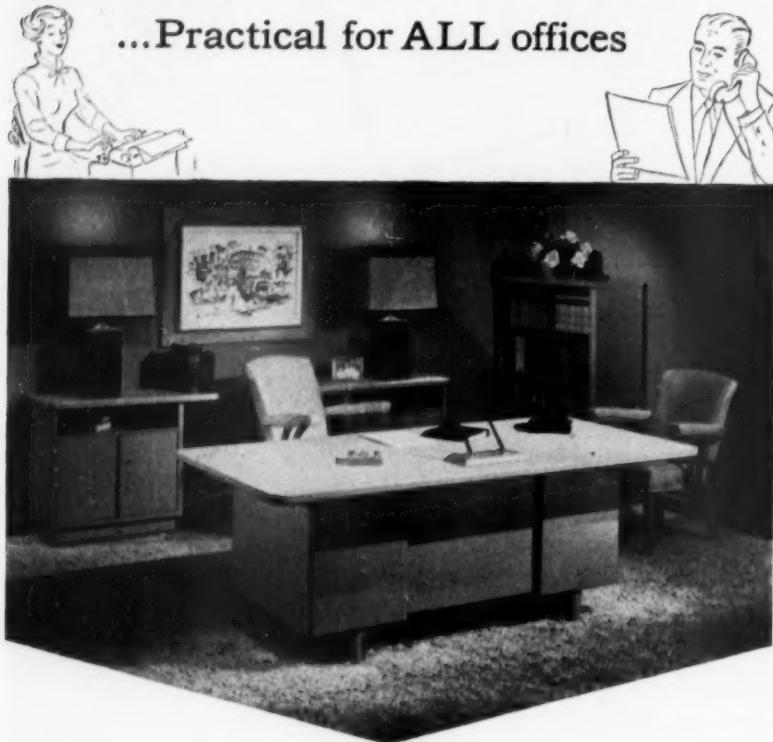
Pliofilm, a rubber hydrochloride—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

We think you'll like "THE GREATEST STORY EVER TOLD"—every Sunday—ABC Radio Network—THE GOODYEAR TELEVISION PLAYHOUSE—every other Sunday—NBC TV Network

3-way protection against air, moisture, liquids

Beautiful for Executive Offices

...Practical for ALL offices



Ask the dealer who features

STEELCASE

to fill you in on these facts:

EXECUTIVE SETTINGS

- Steelcase gives you "years ahead" styling
- Steelcase gives you a choice of many harmonizing color combinations
- Steelcase comfort adds warmth and personality to your office
- Leading national organizations are standardizing on Steelcase for both executive and general offices. Ask your dealer . . . today!

GENERAL OFFICE ADVANTAGES

- Steelcase engineering eases work flow—increases output as much as 35%
- More filing capacity in less space — more employees seated per square foot
- Interchangeable desk tops, drawers and pedestals make office planning flexible



Look for Steelcase in the classified section of your telephone directory.

STEELCASE
Business Equipment

For new ideas in office planning,
write for "Tooling Up Your Office"

METAL OFFICE FURNITURE COMPANY, Grand Rapids, Michigan

a "slot machine." Because of the obvious derogatory connotation of this term, however, we believe it is much more accurate to call machines of the type operated by our members "vending machines."

. . . There is a tremendous difference between vending machines (which offer food products, beverages, cigarettes, etc.) and juke boxes, to which your article evidently refers.

Manufacturers and operators of coin-operated music machines and gambling devices of all sorts are not members of our association. . . .

O. G. LEACH
NATIONAL AUTOMATIC MERCHANDISING ASSN.
CHICAGO, ILL.

More and More Recorders

Dear Sir:

Re your article on the recorder business [BW—Sep. 19'53, p90] . . . many more than 1,000 recorders were sold in the U.S. before 1941. The recorder craze was started in New York by ourselves, then known as Magnamusic, Inc., with a retail store opposite Carnegie Hall on 57th St., in 1938. Small lots of recorders, 12 to 24, had been imported by the firm of E. C. Schirmer in Boston, Mass. before this and sold to individuals. We started the first mass introduction, and wholesaled to G. Schirmer, Inc., New York (their start in the recorder business) for several years before the war. We also had about 20 other firms buying from us, in Boston, St. Louis, New Orleans, New York, and such places as Northampton, Mass. and Albany, N. Y. . . . We sold closer to 6,000 or 7,000 recorders, all Johannes Adler, before 1941.

The Herwiga recorder was introduced in the Midwest in 1939, by a Cleveland wholesaler, and in 1940 or late 1939, David Dushkin started to manufacture recorders (and still does) in Winnetka, Ill. The Midwest market was theirs, just as the Eastern was ours, and credit should be given them for their pioneering. I do not know how many recorders they sold before 1941, but it was in addition to our sales in the East.

The recorder comes in the voices you mention, plus the Soprano.

Harold Newman learned to play the recorder, and bought his first one in our store on 57th St., and the people who organized the American Recorder Society did so through meeting in our store.

The Hargail Music Press did not exist until we went out of business, due to the Army's urgent request for my presence. . . .

THEODORE MIX
PRESIDENT
MAGNAMUSIC DISTRIBUTORS, INC.
GARRISON, N. Y.



When you're "stymied" by a shipping problem—Ask our man!

- Shippers have learned the value of calling in Baltimore & Ohio freight representatives, for these men are steeped in the know-how of efficient shipping. They are friendly and always ready to answer your questions.

They've actually been over B&O lines, seen the operations in yards, terminals and offices. They have studied, under departmental officers, the many phases of shipping you will wish to know about.

At their fingertips is information on B&O's Sentinel Service on carload freight, and Time-Saver on less-carload. They're up-to-the-minute on schedules and handling, and they are keeping current on transportation topics of importance.

So, when special problems cause a "stymie", let the B&O man help remove them. He'll be glad to do it, and his cheerful advice may save you money and needless uncertainty.



**Baltimore & Ohio
Railroad**

Constantly doing things—better!

Profit is a welfare worker

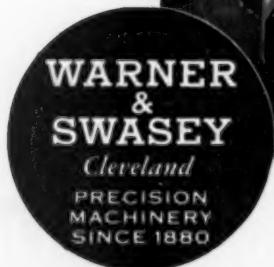
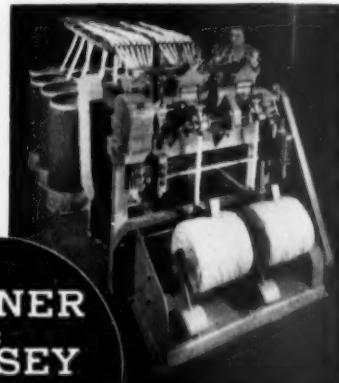
IN ONE of the socialist countries of Europe is a truck factory. The people threw out all capitalists years ago so they could "get a greater share of the fruits of their own labor". . . The workers in this truck factory average \$40 a month.

Workers at comparable jobs in America average \$400 a month.

The truck made by socialists (who don't believe

in profits) sells for the equivalent of \$8,000 and is an inferior copy of an American truck which sells for \$2,000 and still pays a profit to its workers.

The *hope of profit* is still the greatest device mankind ever invented to improve the quality of products and the wages of workers—especially those workers smart enough to know it and to help produce the profit.



*Pin Drafter processing
wool for yarn*

YOU CAN PRODUCE IT BETTER, FASTER, FOR LESS WITH WARNER & SWASEY MACHINE TOOLS, TEXTILE MACHINERY, CONSTRUCTION MACHINERY

Atlac® Dry Polyester Resins eliminate storage loss

Atlac resins make beautiful reinforced plastic goods. And because they're dry powders, they don't "go bad" when stored too long or too hot. Production is simplified, too, because curing cycles stay constant.



Money-saving ideas . . . with Atlas products

Darco® activated carbon boosts beer production . . . improves quality

A new technique in brewing—treatment with Darco activated carbon—adsorbs troublesome proteins; substantially increases yield of beer, and shortens brewing time. Darco-treated beer doesn't get cloudy after cold storage.



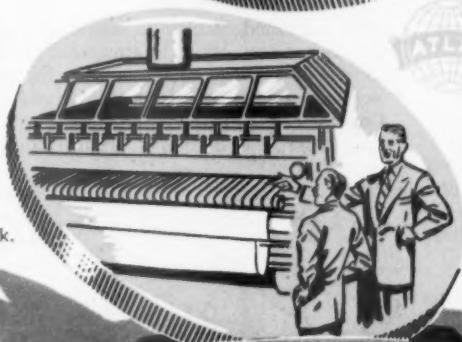
A little low-cost Renex® adds a lot of cleaning power

Small percentages of Renex detergents give a big boost in cleaning ability to metal cleaners, automatic laundry and dishwashing compounds, other cleaning materials. And these better products cost less . . . for Renex products have higher cleaning efficiency.



Revolite® Roll Covers . . . for better ironing at lower cost

Hospital laundry-rooms and commercial laundries cut replacement costs by using long-lasting Revolite covers on their big ironers. And Revolite's finer weave produces a smooth, customer-pleasing finish on all flatwork.



Atlas chemicals, activated carbon, laundry covers and other products are helping many industries to tie down rising costs . . . and reap new quality dividends at the same time. Atlas specialists will be glad to offer technical assistance in finding ways to save money in your own plant, through application of these versatile products.

Serving Industry
Through Chemistry

ATLAS

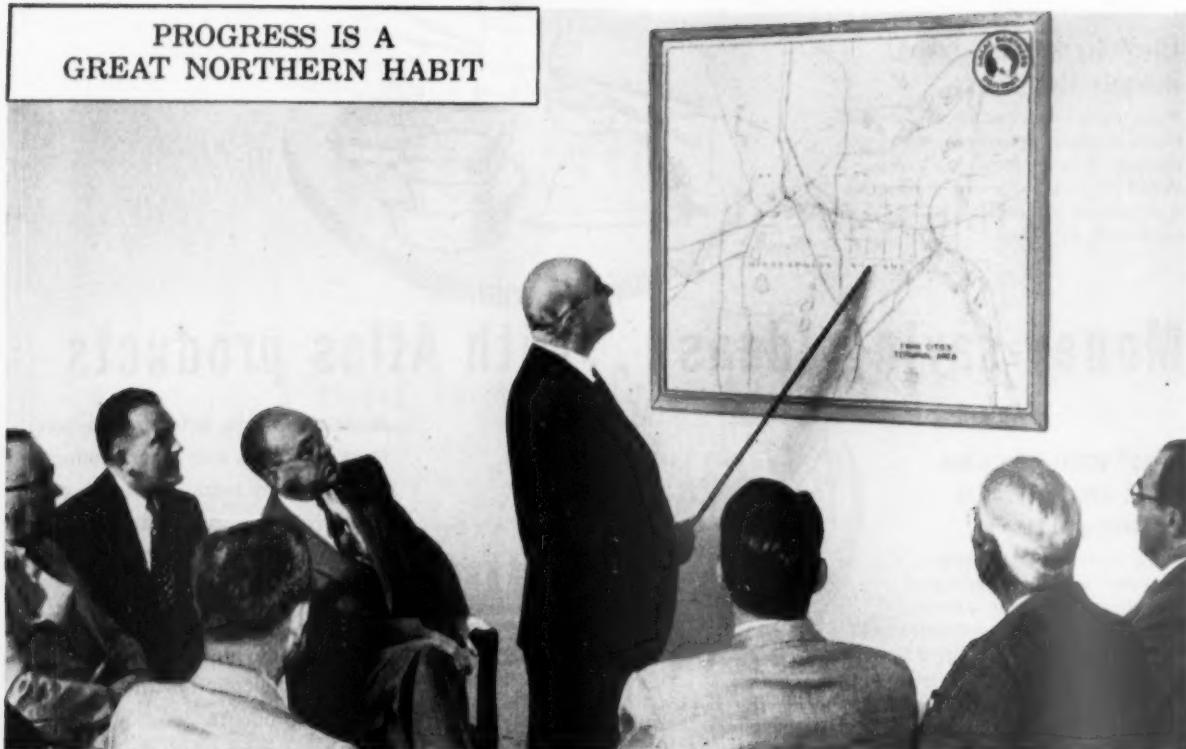
POWDER COMPANY

WILMINGTON 99, DELAWARE

Offices in Principal Cities

Hexahydric Alcohols • Surface Active Agents
Industrial Explosives • Industrial Finishes
Laundry Covers • Acids • Activated Carbons

PROGRESS IS A
GREAT NORTHERN HABIT



A GREAT NORTHERN freight traffic educational team begins its 'schooling' in the railway's headquarters in St. Paul by studying terminal facilities in the area. The 'student' groups purposely are small in number to encourage fullest value to every member. 'School'

sessions begin early, end late, and all GN departments participate. A group travels several thousand miles during a tour, and submits reports and suggestions after returning to home offices. From these suggestions come new techniques in railroading.



OBSERVING GN car-loading methods is part of an educational team's program. They ask lots of questions—and get the right answers.



DIESEL POWER and GN operating methods are studied by freight traffic men for better counsel and service to shippers.

They're going to 'school' for YOU

Well-informed counsel is one of the most important services a railroad can offer its shippers. Great Northern equips its freight forces for better service by conducting a continuing 'school'—on the railway from one end of the system to the other. Constant education is a big factor in the railway's progress—and *Progress is a Great Northern Habit*.



Your freight goes great when it goes

Great Northern Railway

BUSINESS OUTLOOK

BUSINESS WEEK
OCT. 31, 1953



Just a year ago, business gained a great deal of new confidence from the national election. The result, it is now clear beyond all question, will make this the biggest year in history.

Business Week's Index (running between 245 and 250 a year ago and touching a high above 264 this year) will average about 255 for 1953.

Best previous mark was just under 237, set last year.

Flaws, nevertheless, can be picked in the business record.

Fourth-quarter activity probably will average a shade less than a year ago. It was shooting up then, points down slightly now.

And the direction the curve points, more than the actual level of business, is what generates ease or unease in the minds of management.

Much attention now focuses on (1) whether we are in a "rolling adjustment" in which excesses will be corrected without great effect on the overall level of business, (2) whether the correction already is largely complete, or (3) whether this actually is the beginning of something worse.

The immediate business outlook rests on your spending plans.

If you add less rapidly to inventory—or actually draw down your stocks—business activity will continue to recede.

If you reduce your spending for expansion and modernization, the cut will be reflected in employment and payrolls everywhere.

Neither consumers nor government will fill the void you may create.

Wall Street finds itself fascinated by the federal government's shift in fiscal policy—or, at least, fiscal emphasis (page 29).

Buying of stocks and commodities reflects not just the fact that budget balance is out of sight. Many market followers feel such balance has been abandoned because the Administration fears deflationary effects.

These observers cite easier money (page 162) as the telltale.

The Treasury is running a deficit now, will be until big tax receipts roll in next March. And it is willing to sell its new bonds to banks.

Both are inflationary. They pump up the money supply.

Neither deficit spending nor easy money, however, automatically ignites inflationary demand for goods. Each simply increases the potential.

The cost of living is rising, but very slowly. Wholesale prices are actually edging downward. That means the potential, so far, is latent.

Consumers take their cue from availability of goods and from prices.

They can find anything they want on retail shelves. Often, by shopping, they can beat the prices indicated in the cost-of-living index.

This won't change any time soon. There is nothing to spur consumer buying save a rise in income (and, while taxes will come down, incomes aren't going up much currently).

BUSINESS OUTLOOK (Continued)

BUSINESS WEEK
OCT. 31, 1953

Manufacturers of durable goods reached the point, some time ago, where the value of goods shipped exceeded the net value of new business booked (new orders less cancellations).

The Dept. of Commerce figures show that all manufacturers of hard goods still have nearly \$65-billion of business on their books. That's enough to keep them busy for five months at present production rates.

Nevertheless, this is down by about \$7½-billion from the peak.

It's this trend on new and unfilled orders that casts doubt on the rate of business spending in 1954.

Slightly slower demand, cancellations, and declining backlogs may result in some reduction in output. This would mean a need for less inventory to sustain operations.

In addition, any cut in output would cast doubt on expansion plans. This will add interest to the preliminary figures in McGraw-Hill's annual survey of plant and equipment expenditures, due out next week.

—•—

Figures on employment in manufacturing can be read in such a way as to indicate some trimming of sail. However, changes still are so small that, if you remain optimistic, you can call them meaningless.

For example, the number of factory jobs declined slightly from August to September. Normally, there should be an increase for the month.

Employment in plants turning out hard goods reached a peak above 10.1-million last spring. Since then, it has slid by 170,000.

—•—

First warnings of lower factory output might logically appear in layoffs for the least efficient workers and in a reduction in overtime.

With customers less insistent on deliveries, manufacturers are able to take these steps in the interest of efficiency and lower costs.

Thus it is significant that weekly paychecks are getting smaller. The average last month was \$70.49 per factory worker. That's the lowest since November, 1952, and compares with the March peak of \$71.93.

—•—

Consumers may already be paying their bills a little more slowly. Many were relying on overtime to foot their installment payments.

From the merchant's point of view, the decline of perhaps \$75-million in factory payrolls from August to September might be alarming.

—•—

Steel may have seen the worst of its "correction." Iron Age insists two-thirds of the industry's inventory adjustment is over.

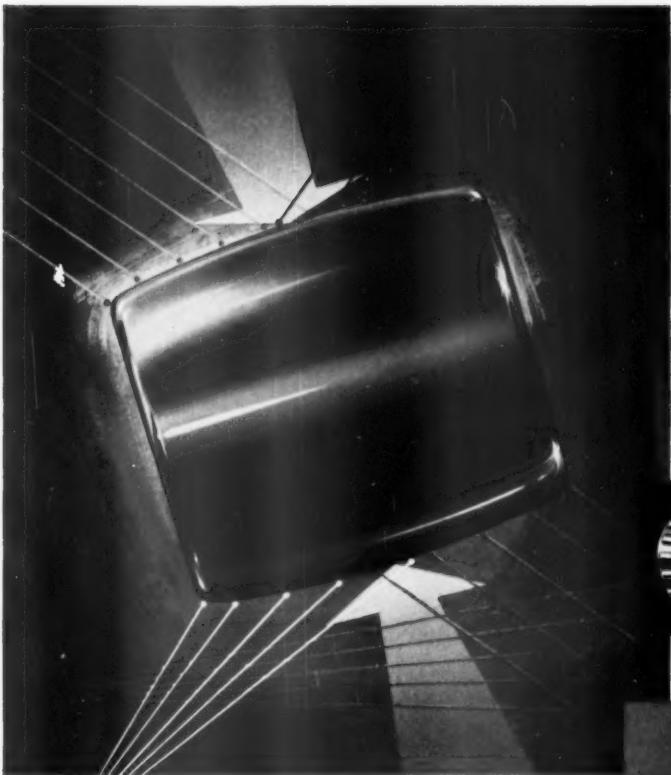
Nevertheless, the situation must still be spotty. There are reports of cancellations here and yon, while Jones & Laughlin this week announced plans to close down five open hearths for lack of business.

J&L also is banking a blast furnace. Layoffs hit 300 to 350.

—•—

Lumber and plywood can be cited as shining examples by those who talk of a "rolling adjustment." Plywood particularly is looking up again after the price troubles of recent weeks.

Contents copyrighted under the general copyright on the Oct. 31, 1953, issue—Business Week, 330 W. 42nd St., New York, N. Y.



A new era in bearings is taking shape...
this

**NEW
HYATT
BARREL
BEARING**

now available in volume!

Industrial designers and engineers seldom make changes in bearing specifications. But when they discover something *really new*—like Hyatt's BARREL BEARING—out come the blueprints! *And this time they know they've got something!* Hyatt's new Barrel Bearing combines dual-purpose design with self-aligning action. It takes load from any direction and operates at full efficiency under conditions of misalignment! And, because barrel-shaped rollers provide high load capacity with low friction, this unique bearing is ideal for a wide range of applications. Best of all, the cost is far lower than you would expect! Let us show you how the Barrel Bearing can improve your product!



HYATT ROLLER BEARINGS

HYATT BEARINGS DIVISION • GENERAL MOTORS CORP. • HARRISON, N. J.



Fresh Packaging Idea...Fresh Appeal!



SEE "MISTER PEEPERS."

starring  Wally Cox, Sundays, NBC-TV Network.

There's nothing more delicate than the flavor of fresh margarine or butter. That's why Reynolds spent years developing the special aluminum foil wrap used by leading producers around their quarter-pound prints.

Now comes another great Reynolds packaging development, first used by Good Luck Margarine. Not only are Good Luck quarter-pounds foil wrapped, but also the whole pound is heat-sealed in Reynolds Aluminum...Reyseal*. *Double* protection against moisture, air, light, odors!

Good Luck dramatizes its new package with the name that women know best as aluminum "packaging"...Reynolds Wrap. You see it right there on the label...the seal with the words: "Quality Protected with REYNOLDS WRAP Aluminum Packaging." It tells the story of *fresher* flavor. It adds another buy-sign to the power of a great brand name...another example of how aluminum serves you best, *with a better story to tell*.

This seal is now being used on the packages of many other famous brand names. For information on how you can use it on your own packaging, contact your nearest Reynolds Sales Office, or write direct to **Reynolds Metals Company**, General Sales Office, Louisville 1, Kentucky.

*Reg. U.S. Pat. Off.

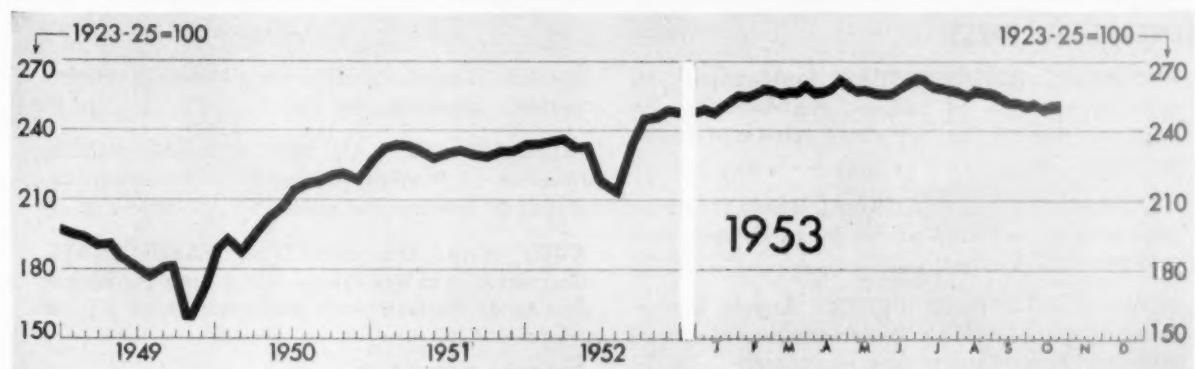
LOOK FOR
THIS SEAL!

On any product it
means the manufac-
turer is using the finest
packaging known.

QUALITY
PROTECTED WITH

REYNOLDS WRAP
ALUMINUM
PACKAGING

FIGURES OF THE WEEK



Business Week Index (above)

Latest Week	Preceding Week	Month Ago	Year Ago	1946 Average
*252.6	+252.5	252.7	244.7	173.1

PRODUCTION

Steel ingot production (thousands of tons).....	2,112	+2,142	2,149	2,229	1,281
Production of automobiles and trucks.....	150,002	+152,743	140,953	144,747	62,880
Engineering const. awards (Eng. News-Rec. 4-week daily av. in thousands).....	\$45,278	\$46,287	\$53,288	\$50,504	\$17,083
Electric power output (millions of kilowatt-hours).....	8,306	8,265	8,354	7,696	4,238
Crude oil and condensate production (daily av., thousands of bbls.).....	6,220	6,311	6,486	6,538	4,751
Bituminous coal production (daily average, thousands of tons).....	1,586	1,546	1,611	1,397	1,745

TRADE

Carloadings: manufactures, misc., and l.c.l. (daily av., thousands of cars).....	80	78	79	83	82
Carloadings: all other (daily av., thousands of cars).....	57	56	59	57	53
Department store sales (change from same week of preceding year).....	-5%	-5%	+6%	+6%	+30%
Business failures (Dun and Bradstreet, number).....	185	169	152	154	22

PRICES

Spot commodities, daily index (Moody's Dec. 31, 1931 = 100).....	393.7	392.9	409.3	410.2	311.9
Industrial raw materials, daily index (U. S. BLS, 1947-49 = 100).....	82.0	80.6	82.1	93.3	††73.2
Foodstuffs, daily index (U. S. BLS, 1947-49 = 100).....	94.9	94.6	95.8	88.1	††75.4
Finished steel, index (U. S. BLS, 1947-49 = 100).....	141.5	141.5	141.7	130.7	††76.4
Scrap steel composite (Iron Age, ton).....	\$34.17	\$32.83	\$31.50	**\$42.00	\$20.27
Copper (electrolytic, Connecticut Valley, E&MJ, lb.).....	29.935¢	29.775¢	29.780¢	24.500¢	14.045¢
Wheat (No. 2, hard and dark hard winter, Kansas City, bu.).....	\$2.32	\$2.27	\$2.18	\$2.43	\$1.97
Cotton, daily price (middling, ten designated markets, lb.).....	32.77¢	32.70¢	32.74¢	35.32¢	30.56¢
Wool tops (Boston, lb.).....	\$2.12	\$2.12	\$2.12	\$2.00	\$1.51

FINANCE

90 stocks, price index (Standard & Poor's).....	193.0	191.6	185.6	191.0	135.7
Medium grade corporate bond yield (Baa issues, Moody's).....	3.80%	3.82%	3.88%	3.55%	3.05%
Prime commercial paper, 4-to-6 months, N. Y. City (prevailing rate).....	2 1/4%	2 1/4%	2 1/4%	2 1/4-2 1/2%	3 1/4-1%

BANKING (Millions of dollars)

Demand deposits adjusted, reporting member banks.....	53,968	53,307	52,801	53,948	††45,820
Total loans and investments, reporting member banks.....	79,072	78,902	78,916	77,909	††2,036
Commercial and agricultural loans, reporting member banks.....	23,112	23,201	23,035	22,333	††9,299
U. S. gov't guaranteed obligations held, reporting member banks.....	31,588	31,319	31,393	32,893	††49,879
Total federal reserve credit outstanding.....	26,437	26,322	26,228	25,867	23,883

MONTHLY FIGURES OF THE WEEK

Latest Month	Preceding Month	Year Ago	1946 Average
--------------	-----------------	----------	--------------

Average weekly earnings in manufacturing.....	September	\$70.49	\$71.69	\$69.63	\$43.82
Cost of Living (U. S. BLS, 1947-49 = 100).....	September	115.2	115.0	114.1	83.4

*Preliminary, week ended Oct. 24, 1953.

**Basing pt., less broker's fee.

†Revised.

‡‡Estimate.

§ Date for "Latest Week" on each series on request.

in BUSINESS this WEEK . . .

GENERAL BUSINESS:

BUDGETING WITHOUT FEAR. Businessmen are drawing up tight '54 budgets, confident that the economy won't make any sharp turns and profits will equal '53. p. 25

TEAMING UP TO RIDE A TREND. Swing to filtered cigarettes spurs proposed merger of Philip Morris and Benson & Hedges. p. 26

NOW—A POWER YARDSTICK. Atomic Energy Commission gets rolling on atomic power plant that will provide a wealth of data for industry. p. 27

WHO'LL DREDGE IT? Local interests raise howl over Army Engineers' proposal that they share cost of deepening channel leading to Fairless Works that's too shallow for ore ships. p. 28

BALANCED BUDGET FADES OUT OF SIGHT.

Russia's H-bomb finished off chance of cutting domestic spending next year. p. 29

PREMIUMS WITH AN EDUCATIONAL PUNCH. Museum of Modern Art exhibits giveaways designed to develop youngsters' artistic taste. p. 30

AUTO WAR: THE STRATEGY TAKES SHAPE. Chrysler bids to buy Briggs, GM dickers for Willow Run space, Hudson plans production boost. p. 32

SPECIAL REPORT:

• THE WORLD IN 25 YEARS: HOW THE U.S. ECONOMY WILL REACH AROUND IT. Americans will be looking overseas as never before for customers, raw materials, investments, jobs—and even vacations. p. 96

BUSINESS ABROAD:

NEW U.S. POLICY FOR AN OLD WAR. Secretary of State Dulles puts more stress on calming Arab fears about Israel. p. 134

BUSINESS ABROAD PATTERN—Guiana: No Royal Road to Freedom. p. 141

BUSINESS HAS ITS SAY ON EX-IM. Businessmen tell Congress it's useful, maybe too cautious. p. 142

	Page
Business Outlook	17
Washington Outlook	37
International Outlook	147
Personal Business	167
The Trend	184
Figures of the Week	21
Local Business	61
Readers Report	8

COMMODITIES:

BUTTER GREASES THE SKIDS FOR THE DAIRY INDUSTRY. Supports encourage overproduction—and keep prices above margarine. p. 120

OIL MEN HEAT UP. Independents—hit by cutbacks in production and burdened by heavy stocks—demand import cuts. p. 124

COMPANIES:

THE NEWSWORTHY WEBB & KNAPP: REAL ESTATE PLUS IMAGINATION. The man and the story behind a headline-hogging operation. p. 130

FINANCE:

FIRST SETBACK FOR THE OPEN-END FUNDS. Declining markets have dimmed their postwar bloom. p. 113

WILDCATTER'S COMEBACK. Glenn McCarthy, with SEC approval, is out to raise \$17-million to hunt oil. p. 116

LABOR:

STEELWORKERS SOUND OFF ON DEMANDS. Wage bargaining will take second place to demands aimed at worker security. p. 150

UPWARD FOR THE SEVENTH TIME. The cost-of-living index for mid-September shows a 0.2% gain over August. p. 154

AIRCRAFT STRIKE FOR AUTO PARITY HALTS WORK ON SUPERSONIC JETS. p. 155

THE LABOR ANGLE: CIO's New Look at Sales Taxes. p. 156

MANAGEMENT:

REORGANIZING FOR AN EXPLODING MARKET. By delegating responsibility Carrier insures that each product gets real attention. p. 171

HANDLING 1,500 EXECUTIVES. Macy's New York uses group discussions to keep its big management staff pulling together. p. 181

MARKETING:

PREACHING A NEW CONSUMER ECONOMICS. Theory in marketing men can build up demand, keep industry's wheels turning. p. 41

DRIVE-INS THRIVE ON SUPERMARKET CRUMBS. Curb-service groceries pick up momentum. p. 48

COLOR SCARES TV DEALERS. Sales drop in some cities, starting worries about Christmas. p. 54

THE MARKETS:

STOCK PRICE BOOMS: SOME DIE FAST, OTHERS LINGER. Varying patterns of past market fadeouts raise dissension over meaning of this year's ups and downs. p. 160

EASY MONEY. Why investment men watching goings-on in bond market expect interest rates to fall. p. 162

THE MARTS:

THE DRUGSTORE WHERE OIL MEN GATHER. In Houston, million-dollar deals are made over coffee. p. 64

PRODUCTION:

WOOD: IMPROVING ON NATURE. New preservatives and processes make wood a better structural material. p. 75

THE PRODUCTION PATTERN: Setting Standard for Noise. p. 82

METALS BOOM CHEMICALS, TOO. Metal men depend increasingly on chemical producers for the raw materials they use in processing. p. 85

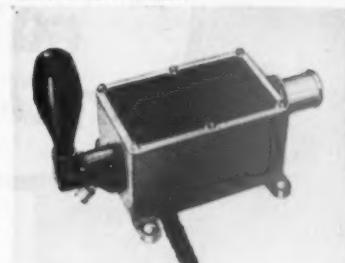
NEW PRODUCTS. p. 88

ELECTRIC STEERING STAND
Also applies to Gyro-Pilot, Triple
Steerer, Electro-Mechanical Steerer.

LEVER PILOT



REMOTE CONTROLLER



INTRODUCING...

COMPLETE ELECTRICALLY CONTROLLED HYDRAULIC STEERING SYSTEMS

■ For smoother, more positive ships' steering control, Sperry has engineered completely integrated Electro-Hydraulic steering systems combining precise Sperry electric controls with dependable hydraulic power components from its associate company, Vickers Incorporated. Now, for the first time, ship operators can have an economical, complete Sperry system of steering, utilizing the advantages of hydraulic power and electric control.

■ These complete systems are versatile in usage . . . they can be directed by any of the following Sperry controls: Gyro-Pilot*, Electric Steering Stand, Lever Pilot, Triple Steerer, Magnetic Compass Pilot, Electro-Mechanical Steerer or Remote Controllers. Each of these units controls the proper size hydraulic steering gear engineered to the vessel's requirements.

■ If you desire accurate, effortless steering for your vessel, write our nearest district office for complete details. Our extensive service organization backs all Sperry equipment.

ADVANTAGES OF ELECTRO-HYDRAULIC STEERING SYSTEMS
*Fingertip action controls steering engine—eliminates need of large wheel.
Dual controls can be simply installed for steering from vantage points.
All-electric control from wheelhouse eliminates lengthy hydraulic tubing.*

*TRADE MARK

SPERRY GYROSCOPE COMPANY
DIVISION OF THE SPERRY CORPORATION

GREAT NECK, NEW YORK • CLEVELAND • NEW ORLEANS • BROOKLYN • LOS ANGELES • SAN FRANCISCO • SEATTLE
IN CANADA — SPERRY GYROSCOPE COMPANY OF CANADA LIMITED, MONTREAL, QUEBEC



THE
TOUGH JOBS
GO TO
TEXACO

EL PASO NATURAL GAS COMPANY operates these gas engines at its El Paso, Texas, installation. Since 1947, when engines first went into service, they have been lubricated exclusively with Texaco Ursa Oil P. El Paso reports rings, bearings and cylinder liners are in A-1 condition...parts' life notably long.



ATLANTIC GREYHOUND LINES, Charleston, W. Va.—winner of 10 Maintenance Efficiency Awards—has lubricated its buses 100% with Texaco for the past 22 years

and says this about the major Texaco Lubricants it uses:
"...engines...exceptionally clean...wear negligible...
does a real job for us."

THE above are only two of many examples of benefits gained through the use of superior Texaco Products and the services of skilled Texaco Lubrication Engineers. Our *One Purchase Agreement* to cover all your plants can help achieve these same goals in every major field of industry and transportation. For details, call the nearest of more than 2000 Texaco Distributing Plants in the 48 States or write The Texas Company, 135 East 42nd Street, New York 17, New York.

TEXACO
INDUSTRIAL LUBRICANTS



Budgeting without Fear

- Businessmen assume that sales volume in 1954 will be down—not for themselves but for the other fellow.
- They are drawing up tight budgets with confidence that the economy isn't going to make any sharp turns.
- And they think tax reductions and stiffer cost control will help them make as much profit as in 1953.

This is the time of year when most companies are drawing up their next year's budgets. The process involves making assumptions about business volume for the coming year, and about wage and tax levels. BUSINESS WEEK reporters this week took a cross-section of business thinking. They found:

• Businessmen are planning on a general decline in business volume—for the other fellow. The great majority expect their own sales to hold up.

• They expect profits during 1954 to be at least as good as in 1953. Even if sales should slip, they count on tax cuts and tighter cost control to underwrite their profits.

A typical prognosis for 1954 is that the first half will be down in business activity, the last half equally up. Thus, the year would wind up within a few percentage points of 1953, by this reckoning.

• **Time of Stability**—Budget makers see no peculiarities in the near future that would cause them to change their method of budgeting. They see 1954 as free from wild swings in the economy. They find it more predictable than many past years.

"At least we have some feeling we know what Washington will or won't let us do," said a New England manufacturer.

Some companies do, of course, make two-way budgets: one to be followed if times are good, the other if there's a slump. But these companies are uniformly the ones that have budgeted that way for many years.

You'll also run across companies that budget only one quarter at a time. Auto and tire makers generally follow this practice, to keep their planning flexible in a traditionally shifty market. One Buffalo company makes an annual budget but revises it about every two

months. Other companies have no budget at all: Their directors have an analysis meeting each quarter. Department stores usually make a one-year forecast but limit their tight budget-making to a quarter at a time, with revision every month.

This variety of procedures doesn't reflect specific uncertainty about the year ahead—just the normal uncertainty of these particular businesses.

• **Income from Sales**—Of the companies queried, 80% are estimating sales income at least as great as in 1953. Exactly half of these companies anticipate an increase in volume of 5% to 15%. About 17.5% are planning on the basis of a 1% to 5% drop in volume; 2.5% expect a larger decrease.

There's a paradox in the crystal-gazing of the 80% who are confident of no decline in their own business volume: Almost unanimously they predict declines in the national economy and in their industries as a whole. For example, one company foresees a 10% drop in its industry's sales, a 15% increase in its own sales.

One big chemical company, whose budget has never been off by more than 2% in the past 12 years, is counting on an increase in sales while business in general is falling off 10%.

A typical report came from Houston: "The companies I talked to figure that even if a recession starts next year they won't be squeezed very much. They feel they have trimmed their sails in the last few years and shouldn't get hurt as much as the next guy. The next guy, of course, is their competitor, who hasn't been handling himself so smart in the past."

• **Maintaining Profits**—Another Midwest company sounded the keynote of the problem of dodging a squeeze on profits. "Our job in 1954," said an

executive, "will be to hold down costs and keep sales at a level to maintain present profit margins."

Budget makers see some help ahead from tax cuts. However, nearly all are budgeting on present corporation tax rates, and less than half are paying excess profits taxes, due to expire Dec. 31. If the basic corporation tax should drop from 52% to 47% next April, it would be so much frosting on the cake.

The biggest help the companies foresee is from their own whittling of operating costs.

"This country has been through years of boom times, and a lot of lax and wasteful practices have crept into business operations," said a Toledo company president. "We drew up our new budget with a firm conviction that the time is here to end such practices."

This company is bearing down on costs in all departments, from office to sales force. But it is also allowing for extra advertising and for the sales expenses of pushing a couple of new products that were developed as much as eight years ago and were held off the market until now, "when it appears that our sales would otherwise dip."

• **Direction of Cuts**—Several companies say they're trimming capital expenditures. As expansion plans are fulfilled, they're not starting new ones. But many of these same companies add, in the same breath, that if business is as good as they think it might be, they'll quickly think up new expansion projects.

No one seems to think it is wise to cut down on outlay for equipment. "Anyone who doesn't keep up with the latest equipment is kidding himself," said a St. Louis manufacturer.

Some companies are cutting promotion and research budgets. High taxes encouraged development work, one executive says. But a majority of companies think they should spend more, not less, on sales promotion and the development of new products and new cost-cutting techniques.

• **Pessimist**—The most pessimistic businessman the BUSINESS WEEK reporters met in this survey was a New England maker of machine tools. This executive said his budget is based on a 40% drop in sales volume; the factory budget is

chopped by 47%. Yet this company follows the general trend in allotting undiminished funds to sales and engineering.

This doesn't mean these two departments can have all they want, the executive explained. "When the engineers come into a meeting to get more money to spend on a new machine," he said, "we all put our hands in our pockets and jingle our change. That usually settles it."

The company has already lopped 24% off the payroll, with a similar cut yet to come. "If the factory has to lay off 50 men, it's the last five that are hardest to drop," the official said. "The last 10% of any cut is the hardest to make."

• **New Element**—A new line is showing up in 1954 budgets. "For atomic energy development," it reads. Public utilities always have to look further ahead than most companies, and those that are participating in atomic energy projects are peering even more keenly than most utilities.

For a public utility, atomic energy is a bigger factor than merely the direct participation by the company. For example, in the Pike County area of the Ohio Valley, a utility has to consider, too, the tremendous influx of people and factories to the atomic development projects.

• **Soft Spots**—The industries where company executives are most bearish are about what you'd expect. Tire companies think sales will drop 10%, to keep in step with new car sales. Television companies say they're worried about what color TV will do to their 1954 market (page 54). Yet one maker who predicts a 10% industrywide drop is budgeting for a 15% increase in his own sales.

A New York manufacturer in the appliance field feels that the end of the excess profits tax will mean a slight price decline. To stimulate sales, he says, manufacturers will be wise to pass the EPT saving along to the consumers.

Department stores are playing it closer to the vest. They are aiming at tighter purchasing, at reducing inventories, even more than usual. "That doesn't mean we'll be out of merchandise the customer wants," said an official of the second-largest department store in a Midwest city. "It means we'll be out of some things he doesn't want."

• **Balanced Inflation**—A big oil company put 1954 down as "another year of balanced inflation." And a steel company in the Midwest gave a sample of what it all adds up to: "We are assuming that steel will operate next year at 85% of capacity. And by eliminating overtime, knocking out all inefficient operations, and saving money as cost of scrap goes down, we think we can make as much money at 85% as at 100%."



CIGARETTE MERGER seems to be coming out of the talks between Joseph Cullinan, Jr. (left) and O. Parker McComas, chiefs of Benson & Hedges and Philip Morris. With B&H's filter-mouthpiece Parliaments zooming, they've proposed . . .

Teaming Up to Ride a Trend

The feverish sprint of filter-tip cigarettes has been the most striking thing in the tobacco business for the past year. Last week, it produced a major change in the make-up of the industry—the proposed merger of Philip Morris & Co., Ltd., Inc., and Benson & Hedges. B&H makes filter-mouthpiece Parliaments, a fast-climbing brand. Philip Morris at present has no filter cigarette.

• **Benefits**—For Philip Morris, the merger means a chance to offset declining sales of its Philip Morris brand by riding the filter trend (BW-Dec. 27 '52, p41). Parliament sales have jumped almost 40% annually for the past few years. Latching onto a going brand will be faster, cheaper, and less risky for PM than launching a new filter entry (as have P. Lorillard Co. and Liggett & Myers Tobacco Co. within little over a year).

Through a merger, PM gets its hands on filter machinery, made by Molin Machinery Co. of England and now just about next to impossible to get in a hurry.

For Benson & Hedges, the deal is a means of tapping the big-company resources—capital, organization, and technical facilities—it needs to exploit fully a good thing. It will get the benefit of a mass-producer's savvy and experience.

"I feel like the man in a poker game who's drawn the fourth ace and doesn't have the money to bet," says Joseph R. Cullinan, Jr., B&H president and board

chairman. While the growing popularity of premium-priced Parliaments with a health-conscious and prosperous smoking public has boosted B&H sales from about \$2.5-million in 1946 to \$13.5-million in 1952, the company has skipped its cash dividends for the past few years. It had to accumulate funds for expansion.

• **In the Offing**—If and when the merger comes off, B&H will become a division of a new corporation, Philip Morris & Co. Directors of both companies have O.K.'d the deal and are now waiting for stockholder approval—expected before the end of the year. Stockholders in the old corporations will get stock in the new company on a one-for-one basis—though before the merger announcement PM stock sold for \$5 to \$10 a share higher than B&H.

One of the first moves of the new company will be to throw its combined efforts into a lusty promotion campaign. Up to now, a mere 16 salesmen have channeled Parliaments into the 60 top U.S. cities. With almost 500 PM salesmen on the job, they'll reach hundreds of smaller communities with benefit of every point-of-sales promotion gimmick in the books.

That may be just the beginning for the team. B&H is already test-marketing a king-size version of Parliaments, expects to go national in a year. And rumor has it PM is experimenting with cork tips, and may even bring out another filter model some time during the coming year.

ATOMIC REACTORS — (outside the Iron Curtain)

Dozens Built, More in the Works

In Operation

In
Operation
Under Construction
or Planning

EXPERIMENTAL REACTORS

AEC — Los Alamos, N. M.	3
AEC — Long Island, N. Y.	1
AEC — Chicago, Ill.	2
AEC — Arco, Idaho	1
AEC — Oak Ridge, Tenn.	3
AEC — Schenectady, N. Y.	1
North American Aviation, Inc.—Downey, Cal.	1
North Carolina State College—Raleigh, N. C.	1
Canada	2
England	1
France	2
Norway	1
Australia	1
Switzerland	1
India	1
Sweden	1

REACTORS PRODUCING FISSIONABLE MATERIALS

AEC — Hanford, Wash.	several
AEC — Augusta, Ga.	several
England	at least 2

POWER REACTORS

Experimental with some power:

AEC — Arco, Idaho	1
AEC — Oak Ridge, Tenn.	1
England	1

Ship propulsion:

AEC — Arco, Idaho	1
AEC — Schenectady, N. Y.	1
Norway	1

Industrial power:

England	1
AEC — Ohio, Ky., or Tenn.	1

Now—a Power Yardstick

The first dead-serious U.S. move to build a utility-size atomic power plant is in the works.

The Atomic Energy Commission's stepped-up schedule aims to have a nuclear-fueled plant generating big chunks of electricity for industrial use within four years. The facility could well be the forerunner of the future industrial power plant. Economics and technology will decide whether the atom will complement and eventually supersede conventional sources of power.

• **Decisions**—AEC plowed through some tough policy decisions to bring this plant to the drawing boards at Westinghouse Electric Corp., which holds the development contract. Issues that have stalled atomic power progress for two or three years were either met

head-on or pushed away to one side.

The decision to go ahead at this time was taken in the face of Russian development of H-bomb techniques. AEC could have used this threat as an excuse for stalling, pleading that it had to turn all its resources to military objectives. Instead, it chose to play up the industrial power plans as a diplomatic coup.

The truth is that AEC believes that its fissionable materials program is already big enough to keep the U.S. ahead in the armament race. Plans at this time do not call for another round of expansion for the basic production plants. What's more, the big diffusion plants at Oak Ridge, Portsmouth, Ohio, and Paducah, along with the reactor production plants at

Savannah River and Hanford, Wash., can handle all the raw materials in sight.

These plants turn the raw materials into bomb-worthy plutonium and other materials needed for weapons. AEC is satisfied that their production is high enough to permit emphasis on straight power production in the new reactor. Otherwise, it might have decided on a dual-purpose affair.

• **Government Control**—A harder decision was keeping the first straight power reactor under government control. Some AEC members feel that the government's atomic monopoly is already holding back technical progress; they want private industry to move into the field. But when no privately financed offers came for the power reactor, AEC was in a position to go ahead on its own.

Congress tipped the scales in favor of action this year by giving AEC the funds and telling it to go ahead with the development of a power reactor. AEC is contracting the work to big companies, as it does on most major jobs. Westinghouse will develop the plant, but AEC can still spread the rest of the work, including conventional equipment and building. It may also give the operating contract to another private company.

• **New Data**—The new plant itself should provide scientists and engineers with a wealth of data—on design, construction, and operation—that could only be obtained from a life-size working model of an industrial power plant. Power company officials will keep a sharp eye on costs, efficiency, and dependability.

The projected plant will have an installed capacity of at least 60,000 kw.—enough, if dependable, for a city of 100,000 people. No cost ceiling was disclosed, but estimates are that the reactor plus the conventional parts of the plant will run between \$30-million and \$40-million. That's more than double the cost of an equivalent coal-burning plant. No one expects the atomic plant to produce power at competitive costs. What it should do is provide a fairly accurate measure for future nuclear power costs.

The economics of power run something like this:

A conventional power plant costs between \$160 and \$200 per kw. of capacity. To get a return on this investment, a rate of three or four mills per kwh. is needed if the plant runs at 70% of capacity—which is above average demand. Add to this fuel costs of two to three mills and you get production costs ranging from five to seven mills per kwh.

The nearest approach to a firm figure on nuclear power costs is two mills or less per kwh. for fuel. The capital costs

are in the realm of guess, but if they run much over \$200 per kw. of capacity the plant won't be competitive. That's the far-off goal, but on its first plant, AEC will probably be pleased as Punch if it can get down to \$500 or \$600 per kw.—which means a total of at least \$30-million.

• **Leftovers**—The Westinghouse engineers will not be starting from scratch in their designs. A major portion of the plant will be conventional, with no big changes expected in turbine or generator.

The big change will be the departure of the firebox, to be replaced by the reactor, where heat is generated from a chain reaction. The new fuel will probably be enriched uranium, with a higher than normal proportion of fissile uranium 235. Water under high pressure will be pumped in to control the reaction and to bring out the heat. This heat will have the same function as in a conventional boiler, turning water into steam that pushes the turbine.

A reactor of this type, known as a pressurized water reactor (PWR), was being developed to power a large aircraft carrier. This plan was dropped early in the year as the military picture shifted. But Westinghouse, working on the reactor, picked up a lot of experience that will probably be carried over into the power job.

• **Admiral at the Helm**—As boss, the new project inherits Rear Admiral Hyman G. Rickover from the carrier and submarine programs. Utility executives and some AEC scientists aren't too happy about the naming of Rickover. They feel any Navy man will slant the program toward shipboard use.

Actually, a carrier reactor and a power job differ chiefly in the compactness and shielding of the former. These qualities, essential on a ship, would skyrocket costs without adding much to industrial development. To prevent its power program from straying, AEC has banned the spending of extra funds or time on shipboard adaptations.

AEC has not only reserved the right to bring in companies other than Westinghouse, but it has assured the five industrial teams now studying atomic power generation (BW—May 30 '53, p48) that they will have access to progress reports throughout the project.

The plant is not the first venture made by AEC in the electric power field. As far back as 1946 a small project at Oak Ridge sought to obtain useful electricity from nuclear fuel. The work was dropped when it showed little promise. The commission first actually produced electricity from the atom at its experimental breeder reactor in Idaho, Dec. 21, 1951. Rated capacity was 150 kw.



Who'll Dredge It?

Army Engineers think private interests should share cost of deepening channel to Fairless Works.

When U.S. Steel Corp. built its giant Fairless Works on the Delaware River (map), the company was looking forward to big things. This was going to be a very efficient kind of steel mill—a tidewater mill. Big, ocean-going ships would carry ore up the Delaware and unload directly on the Fairless docks.

U.S. Steel realized, of course, that the river was not deep enough for heavily laden ships to get past Philadelphia. A ship of the Liberty class, fully loaded, needs a channel 40 ft. deep. The Delaware's depth from Philadelphia to Trenton ranges from 37 ft. to 25 ft.

But U.S. Steel executives had held discussions with the Army Corps of Engineers, and the Engineers had said it was perfectly feasible to dredge the Delaware to the required depth. Apparently expecting that the channel would be dug, U.S. Steel went ahead and built its plant. But the channel didn't get dug (BW—Jul. 12 '52, p34). There was much dickering and delay in Washington. The last recommendation of the Board of Engineers for Rivers and Harbors—a recommendation made in February, 1953, for a 40-ft. channel—is still in Senate committee.

Now the Engineers have come up with a new proposal: We'll dig the channel to 35 ft., and local interests will go 50-50 with us on dredging out the remaining 5 ft.

• **Storm**—This has raised a howl of protest from the local interests. Says Harry G. Schad, chairman of a Phila-

delphia port improvement committee: "Why should U.S. Steel or any group of industrial firms be forced to pay for work which the Army Engineers readily admit is necessary in the development of the entire area?"

The Engineers reply that this new recommendation is designed to bring the proposed project "into line with current water resource policies." These policies call for less interference by the federal government in local affairs.

Where the dispute will end is anybody's guess. Even if the local interests and the Engineers reach some kind of agreement, the project will still have to be authorized by Congress. Then there will have to be an appropriation of funds. To dredge the channel to 35 ft. will cost an estimated \$55-million. The remaining 5 ft. will cost about \$36-million—of which \$18-million, the Engineers say, should be paid by local interests.

• **Carrying On**—While all this has been going on, U.S. Steel has been supplying its Fairless Works through a combination of water and land transport.

The company hopes eventually to supply the plant with ore from its fabulous Cerro Bolivar mine in Venezuela, moving ore on big ships all the way from the South American coast to the Fairless Works. The mine is still in developmental stages; U.S. Steel expects the first shipment of ore will be made in about three months.

Stock Exchange Ruling Cuts IBM Dividend

The New York Stock Exchange got tough with International Business Machines Corp. this week. It disapproved payment of the 5% yearend stock dividend that has been a fixture with IBM for 17 years. Its reason: The stock distribution, added to a \$4 cash dividend for the year, would have put value of dividends in excess of earnings per share.

IBM cut its stock dividend in half, to 2½%, and laid the blame on the Stock Exchange. The 2½ stock dividend will be paid Jan. 28 to owners of record Jan. 4. The cash dividend is \$1 per quarter, as in recent years.

• **Old Rule**—The Stock Exchange had restated its policy last February, saying that it would make no general exception to its 10-year-old rule that cash and stock dividends together must not exceed earnings per share, where stock distributions amount to less than 25% of the previously outstanding shares.

Records show that in 1950, 1951, and 1952 IBM paid out, in cash and stock, more than earnings per share. The Stock Exchange said it had protested several times.

Balanced Budget Fades Out of Sight

- It's not given up as a long-run goal but it's out of present picture; Russia's H-bomb finished it off.
- There's little chance of cutting domestic spending next year; that needs solid Republican majority.
- So there'll be more deficit spending, small inflationary doses, a stiffening against tax reductions.

The Eisenhower Administration has given up trying to balance the budget for the next fiscal year.

Key officials are willing to admit privately that if it is balanced at all, it will be the result of a miracle—a gift of the Russians—not of any present plans.

That's a fundamental change in Administration thinking—and a change in the business outlook, too.

It doesn't mean Eisenhower has given up a balanced budget as a long-run goal. But that balance has been shoved into the indefinite future. In effect, this is what Administration spokesmen are now saying:

- We can't cut defense spending enough to balance the budget—not now that Russia has the hydrogen bomb. That's from the new Joint Chiefs of Staff.
- We can't cut the expensive domestic programs until we get a friendly Congress with a solid Republican majority.

I. New Business Climate

All this means more deficit financing, more federal spending at a high level, and—in the words of Budget Director Joseph M. Dodge—"a war economy no matter what you may choose to call it."

This is a sharp break from last summer, when the Administration had the comfort of a brand-new Korean truce, and administrators were happily cutting billions from the Democrats' last spending plan.

Tied in closely with the new thinking is a willingness to let inflationary forces work, at least in small doses. You see that in the way the Treasury packaged its \$2-billion new money financing this week. Most of these 7-year-10-month bonds will wind up in the hands of banks. And that was what the Treasury had in mind.

That means some \$2-billion additional money in the economy, as the Treasury writes checks on new funds. A Treasury offering designed particularly for long-range investors would not have done this.

A Treasury spokesman said the de-

cision was made because that's what the market seemed to want.

One reason for backing away from a proposed 15-year offering was that it would compete for long-term money that might go into mortgages. There, again, is the new attitude: Don't do anything to dry up mortgage money when housing starts are declining.

- **Taxes**—The change probably means the Administration will stiffen against tax reduction. The idea is that if it can't cut spending, it can hold deficits down.

Treasury Secretary George M. Humphrey laid out this thinking at the Pebble Beach, Calif., meeting of the Commerce Dept. Business Advisory Council last week. He stood by earlier promises that the excess profits tax would die Jan. 1, and that most income taxes would be cut around 10%. Beyond that, he would promise nothing.

Until this meeting, members of the House Ways & Means Committee thought Humphrey would not object to net tax reductions up to an additional \$1.5-billion or \$2-billion. Committee members would like these as relief for working mothers, say, and in other politically attractive packages.

At Pebble Beach, Humphrey emphasized that the Administration will continue to oppose cutting the basic corporation rate from 52% to 47% next Apr. 1, as the law allows. He would not even promise a net cut in excise taxes. The law calls for reduction of the special post-Korean excises Apr. 1, but Humphrey left the impression that he hopes for new excises on enough items to make this up, with some additional revenue.

II. Put Off—Not Changed

The new Administration thinking will be called a change of policy. Actually, it was not a formal decision at all. It is more like a grudging admission that Russian threats and expensive domestic programs are not matters that economy-minded administrators can control. It amounts to postponement of Eisenhower's cherished budget goal.

Military spending, of course, is the key. If Russia appears really committed to a more peaceful world, this can be reduced swiftly. But few expect anything to change dollar-outlay plans. These now call for a rise in military spending to \$43-billion or \$45-billion next fiscal year, then up to perhaps \$50-billion (BW-Oct. 10 '53, p27).

III. Changed Domestic Picture

The Russian H-bomb was the turning point. It ended the hope of "more arms for less money."

Quietly and reluctantly, Eisenhower's budget balancers have abandoned another hope—that Administrative efficiency alone can markedly reduce government costs.

This came hard. But even Budget Director Dodge now stresses that the bulk of domestic spending is frozen into law—and can only be changed by new laws. Most of the savings from better administration have already been made.

The long road to less domestic spending depends on a Congress that would dismantle functions Dodge calls a "costly trap of built-up dollar demands."

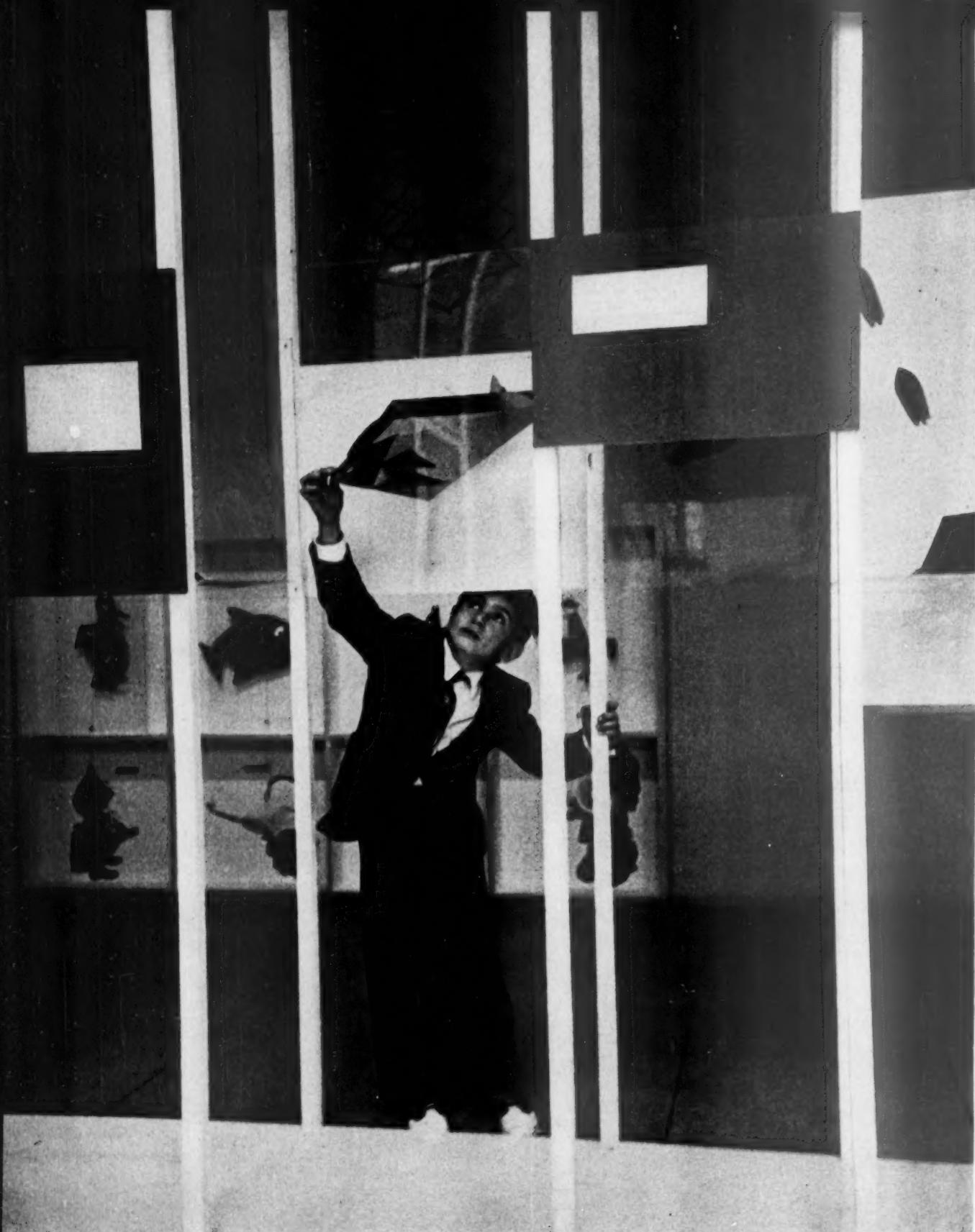
- **Examples**—Price support for farmers is his favorite example. He points out that the original budget for the last fiscal year called for \$253-million for price-support loans—President Truman's figure. When the year closed last June 30 under the Eisenhower Administration, almost \$1.9-billion had been passed out to farmers. The rise was due to unforeseen surpluses.

In the same category, Dodge puts veterans' compensation, unemployment assistance grants, highways, health, and similar items. This group comes to \$15-billion, when interest on the public debt is included.

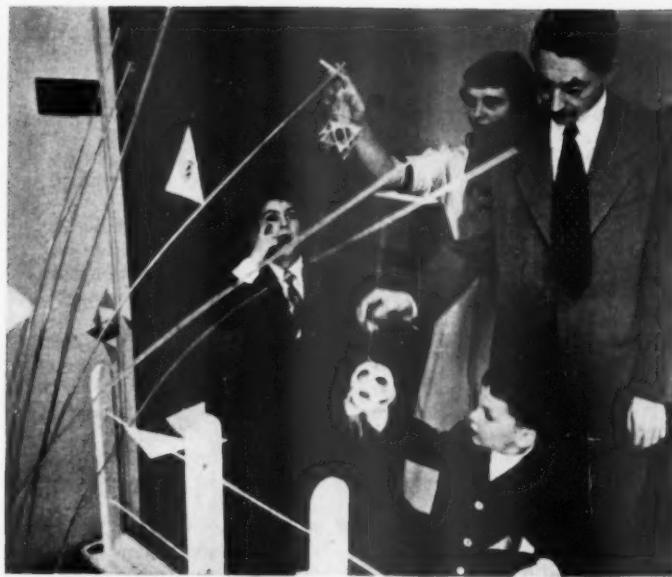
The "fundamental change in management philosophy," which he put such store in originally, cannot affect this spending.

- **Congress**—The chance of getting Congress to trim down government functions next year is largely discounted. It's too evenly divided between the parties, and the Wisconsin result—interpreted as meaning that farmers want high-level price supports continued—didn't sound like an economy mandate to nervous lawmakers.

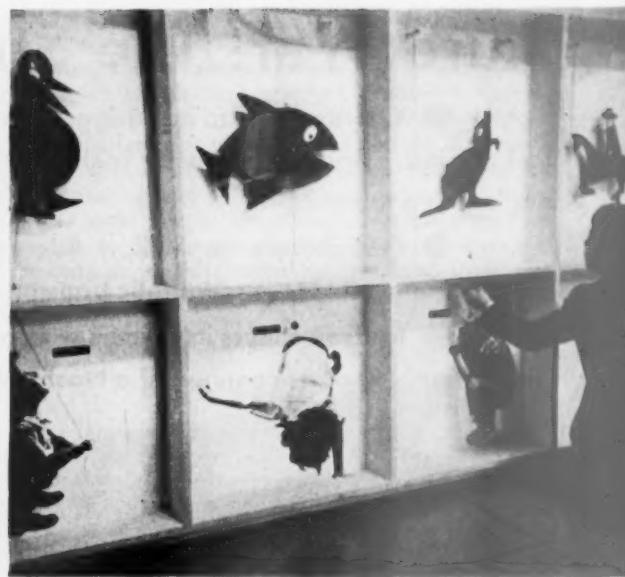
This means the budget-balancers must wish for election of an economy-minded Congress in 1954, and hope for a solid working majority of Republicans in both houses. Even then no big slashes in domestic spending will get serious attention until the 1956 fiscal year starting July 1, 1955.



TOY EXHIBIT at New York's Museum of Modern Art looks like fun, but there's some hard-headed thinking behind it, too.



CHEAP MATERIALS—in these ornaments, paper—make toys practical for use by manufacturers as giveaways or premiums.



ESTHETIC VALUE: Boy may not realize it, but playing with well-designed toys helps him develop his artistic taste.



CREATIVE TRAINING: Many of the toys, like this system of disks, are designed so youngsters can rearrange shapes and colors.



FUN isn't forgotten, however. This revolving drum is ringed with slots through which you can see moving figures.

Premiums with an Educational Punch

Manufacturers of breakfast cereals are wont to swap box tops for whistles, yo-yos, and police badges. These toys are necessarily cheap. What's to prevent them from being educational as well?

That's the question two industrial designers—A. F. Arnold and Joseph Zalewski—asked themselves several years ago. Each had a son, and each started making his own toys. They concentrated on simplicity and on cheap ma-

terials such as paper, cardboard, and plywood. They also emphasized artistic design.

They worked separately at first, later decided to join forces in designing toys specifically for use as manufacturers' premiums and giveaways. New York's Museum of Modern Art heard of what they were doing, and the result was an exhibit titled "Premium Toys Designed for Industry," now open on the museum's ground floor. The sponsor is

Davis, Delaney, Inc. (New York), a commercial printer interested in promoting well-designed paper and cardboard toys.

Few of the toys in the exhibit would cost more than 25¢ each to mass-produce. They range from miniature housebuilding sets to rocket ships. Some are merely arrangements of colors and shapes. They're all designed to develop a youngster's artistic taste and expression.

Auto War: The Strategy Takes Shape

● Chrysler's bid to buy Briggs means a fight to regain lost ground. And the company is shifting its emphasis from engineering to style.

● GM dickers for Willow Run space, which could give it strong spot in the automatic transmission field.

● Hudson cheers its owners with promise of boosted production. Reports continue of a Nash merger.

The struggle for automotive leadership last week resembled the early stages of a major military campaign. The tactics to improve an immediate situation could be seen or were whispered about. But they only foreshadowed strategy carefully planned to win a big victory months away—and the automobile industry always plans 18 months ahead.

Tactical efforts are aimed at the 1954 market, which even most of the manufacturers now agree will be 10%-15% lower than the 1953 volume of approximately 6-million cars. The strategy concerns the 1955 market that probably will determine for years ahead the relative positions of the car manufacturers. The tactics real or reported:

- Chrysler Corp. announced a bid to buy its major supplier, Briggs Mfg. Co., for about \$35-million.

- General Motors offered to lease 65,000 sq. ft. of additional space for Hydra-Matic production at the Kaiser-owned Willow Run auto plant, according to Edgar Kaiser. Trade talk is that GM actually is trying to buy the entire plant.

- Hudson Motor Car Co. announced a 33% increase in production beginning this week.

The Hudson move is both tactical and strategic. Hudson, with a new model to push, has been short of cars. A brief strike complicated this. Last week's production was 862, according to Ward's Automotive Reports, 20 less than the preceding week. From a long-range view, if the Hudson-Nash merger goes through (BW-Oct. 10'53, p34)—and reports persisted this week that it was still in negotiation—the increased production would be reassuring to Hudson owners.

- Doubled Capacity—If GM plans to purchase the entire Willow Run plant—completely logical in view of its tremendous investment there (BW-Oct. 24'53, p28)—it would be a strategic move of immense importance.

It would double GM's previous space for automatic transmission output. The auto industry is moving rapidly into a

period when automatic transmissions will be standard equipment, although probably at a premium price. Already they are important in sales. According to Ward's, 50% of all cars sold have automatic transmissions.

The conversion of the entire Willow Run facility to production of the device potentially would put GM in an unrivaled competitive situation for equipping a higher production of its own cars.

- Chrysler Deal—All of those moves, if they mature, will have a marked impact on the long-term strategy. But they are overshadowed by the Chrysler offer to buy Briggs. The proposed purchase has to be approved by the Briggs stockholders—primarily the estate of the late Walter O. Briggs. If it is approved, the action will give Chrysler its own body supply for its highest-selling line—the Plymouth—and end the always touch-and-go process of assembling Plymouths.

Most Plymouths, upward of 2,000 a day, come from the mammoth plant at Mt. Elliott and Lynch in Detroit—billed as the world's largest auto assembly operation. Yet, this plant hardly ever has more than one hour's supply of bodies. A wildcat strike at Briggs (a frequent happening) shuts down Plymouth assembly within an hour.

The Briggs purchase also heralds the start of Chrysler's effort to retain its standing as one of the "Big Three."

GM since the end of the war has spent well over \$2-billion in expansion and modernization. Ford Motor Co. is well past the halfway mark of a \$1.4-billion program (BW-Oct. 17'53, p130) which already has enabled it to vault over Chrysler into the No. 2 spot.

Chrysler will not put a price-tag on its changes since the end of the war. But its balance sheet at the end of 1945 carried property, plant and equipment at \$122-million, as against \$449-million Dec. 31, 1952—a gain of only about \$327-million.

In 1946, first full production year after the war, Chrysler had 25% of the market. Last year, it had 21%

and its share has been on a descending curve in all but one postwar year.

- Sales Accent—Chrysler's past and future performance is tied to a strange mixture of philosophy and finance.

Chrysler has been dominated by an engineering approach to sales, while for the past few years, the competition has stressed style. Chrysler's top management has been rock-ribbed in the intention to build a better car than the competition and sell it on performance rather than on how it looks.

This, in Chrysler's case, has meant a more expensive car to produce. Its Plymouth, the only approach to the Ford and Chevrolet in sales volume, sells for a slightly higher price.

Quality has not been the only factor in cost. Chrysler, more than either Ford or GM, relies on outside suppliers. This has kept costs high, as witness the Briggs setup. Chrysler's Plymouth accounted for about 80% of Briggs volume. In 1952, Briggs profit was \$5.7-million.

- Competition—Chrysler for years has operated on the assumption that it could not compete with Ford and GM. As recently as last week, high Chrysler executives emphasized that the company was not out to recapture any particular share of the market from GM or Ford.

The Briggs deal last week was the first indication of a reversal in thinking. The \$35-million price will cover 10 Briggs facilities in Detroit and one each in Evansville, Ind., and Youngstown, Ohio.

- Expansion—The 12 plants that Chrysler will get for its \$35-million give it a facilities expansion much larger than that amount of money could buy in today's market. This expansion doesn't in itself increase Plymouth's 3,300-car-a-day output (both Chevrolet and Ford are pushing cars out at a 5,000-6,000-a-day clip). But it does give a potential increase in capacity through one over-all management that can tighten up scheduling, improve labor relations, and feed more bodies to assembly plants. Of prime importance, it will go a long way in reducing the high cost of Plymouth production.

- More Style—As Chrysler philosophy is changing on its ability to compete with GM and Ford, so, too, is its sales philosophy.

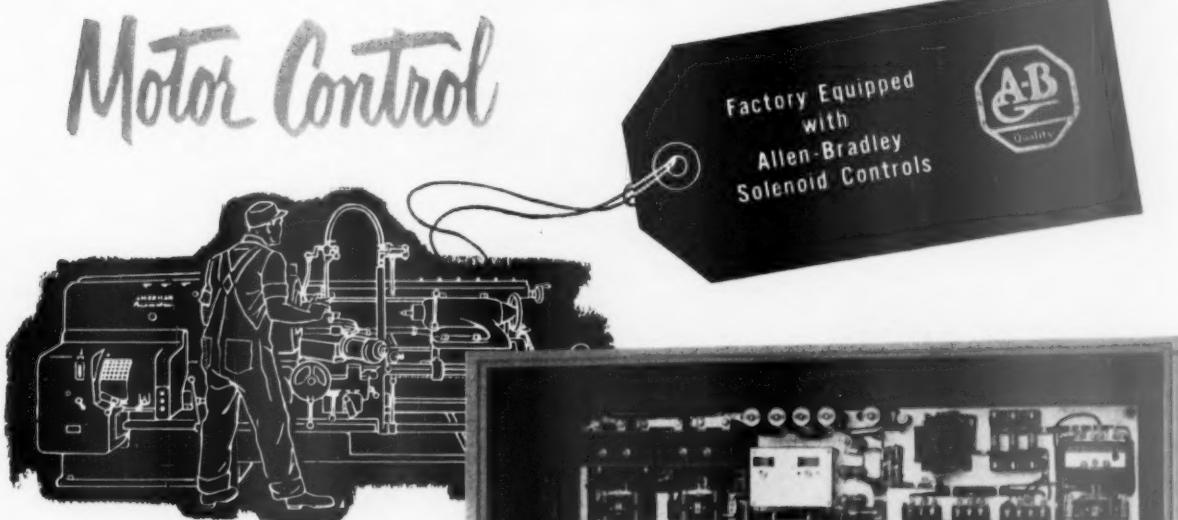
This year the entire Chrysler line is in step with the other auto companies in stressing style. Nowhere is this more true than at Plymouth. Follow-up advertising after the splurge for the new models will again point out Chrysler quality, but the importance of style appeal will not be dropped.

**"AMERICAN" CROSS CENTER
DUPLICATING LATHE**
operated by
ALLEN-BRADLEY

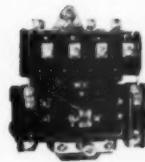
The "American" Cross Center Lathe is playing a prominent part in the manufacture of jet engine components. This is another example of a prominent machine-tool builder using reliable Allen-Bradley control.

The simplicity of Allen-Bradley solenoid motor control is the reason for its reputation for rugged, dependable, day-in-and-day-out performance. Because of its ONE moving part, millions of trouble free operations are assured. The double break, silver alloy contacts require no maintenance. Reliable overload relays are on the job constantly, protecting men, motors, and machines. You can't go wrong in writing Allen-Bradley motor controls into your specifications.

Allen-Bradley Co., 1332 S. Second St., Milwaukee 4, Wis.



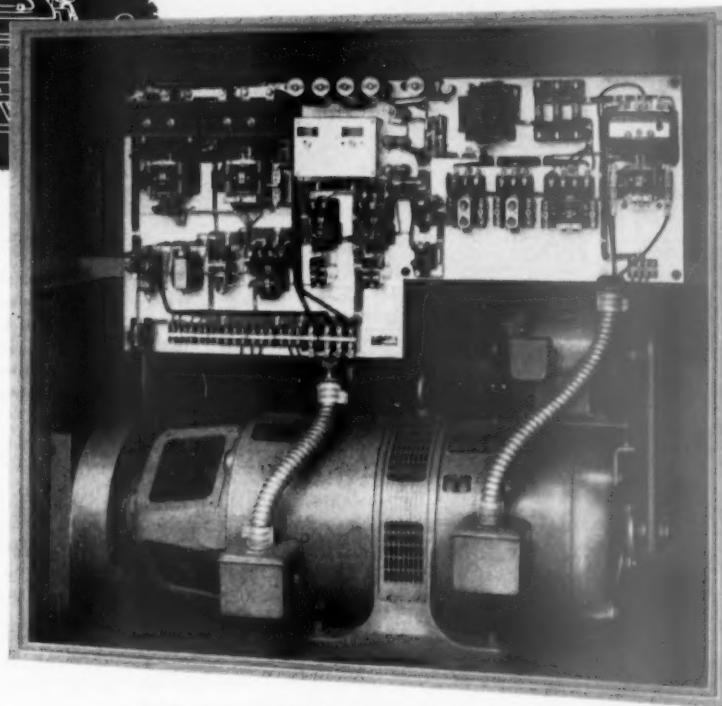
Bulletin 609
Manual Starter



Bulletin 709
Automatic Starter



Bulletin 702
Solenoid Contactor
with a timing relay



The Allen-Bradley controls which operate the "American" Cross Center Lathe.

ALLEN-BRADLEY
SOLENOID MOTOR CONTROL
QUALITY

Important Ingredient for CANDY SALES

Just as important as the select ingredients that go into the making of candy bars is the wrapper. It must be attractive, economical, and keep the candy fresh and tasty.

Rhinelander Glassine performs this job precisely. The density of this quality packaging material keeps out unwanted air and dampness and furnishes the super-greaseproof quality that prevents stains. Waxing, laminating, or lacquer coating multiplies its ability to retain product freshness and pleasing aromas. Moreover, its glossy beauty and excellent printing surface are important aids in selling.

Rhinelander glassine and greaseproof are also used in boxed or bagged candy and in other candy packaging applications where beauty, as well as greaseproof protection, is necessary.



Rhinelander papers come in a variety of standard grades, or they can be tailor-made to fit your needs. Write for samples, stating your application.

Glassine and Greaseproof Papers...

Glassine and Greaseproof papers, either plain, waxed, or coated, are used as inner liners and outer product wraps • product bags and envelopes • insert labels • for laminating to other packaging materials like foil, boxboard and films • packaging accessories, and scores of other applications in the food packaging industry where greaseproof qualities are essential.



Protective Paper . . . Consistently Good
... For Economical Packaging

RHINELANDER
Paper Company • Rhinelander, Wisconsin

BUSINESS BRIEFS

To push rockets: Mathieson Chemical Corp., which makes rocket fuels, has announced plans to buy up to 50% of the stock of Reaction Motors, Inc., which builds rocket engines. Mathieson hopes to buy about 45% of Reaction stock from present holders at an average price of \$16. It will pay the same price to the company for another 12,500 shares.

Replacement tire sales will jump from 49-million in 1953 to 51-million, according to Joseph A. Hoban, vice-president of B. F. Goodrich. If he's right, the rise will provide a sizable cushion against predicted losses via a reduction in new car production.

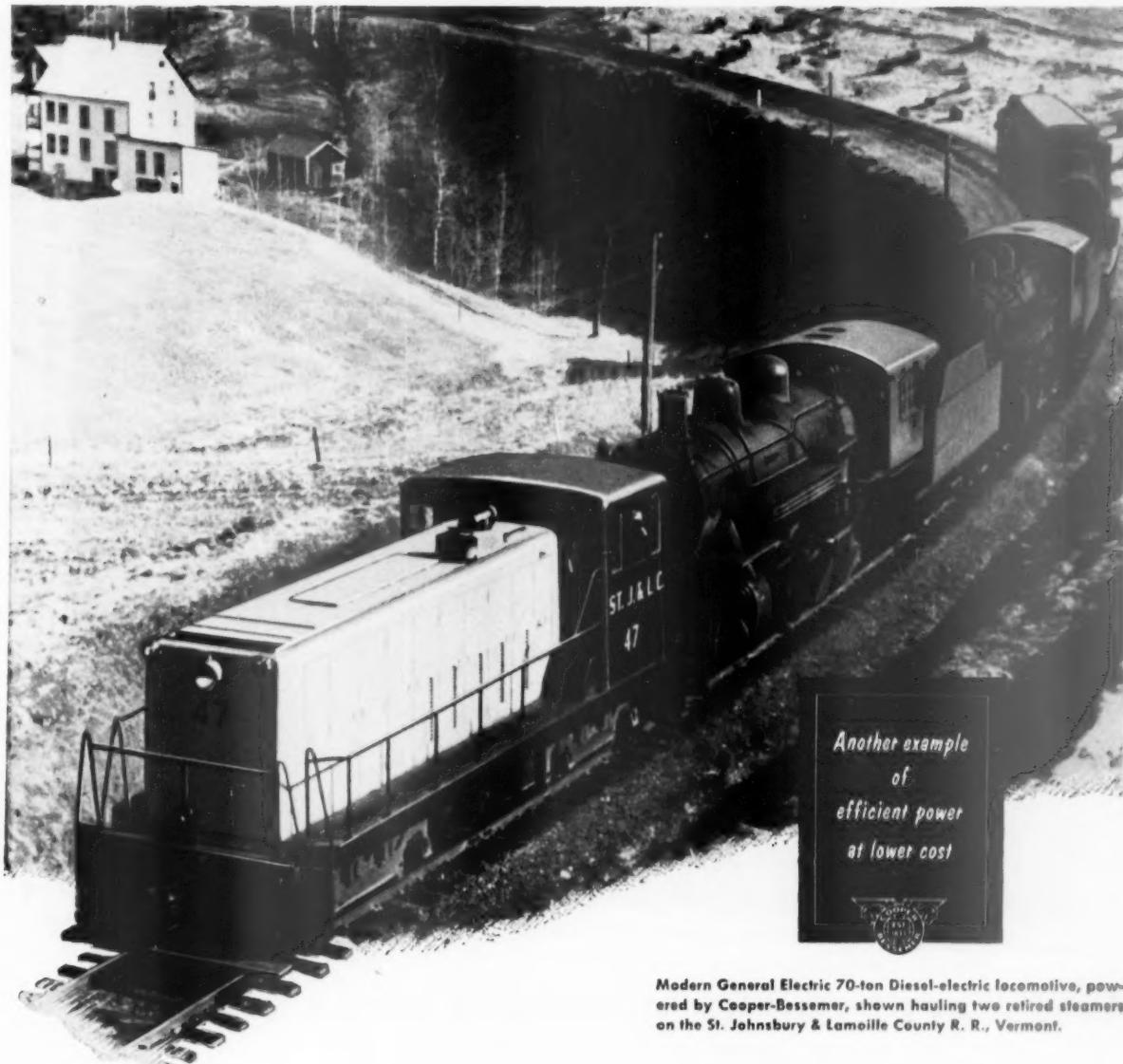
U. S. Steel earnings in the third quarter were \$61.7-million, topping the second quarter's \$55.6-million despite a drop in production. Sales in dollars were up, with high-priced items making up an increased proportion of sales. Earnings per share were up to \$2.12, compared with \$1.89 in the June quarter.

The Allstate car, Sears, Roebuck's entry in the auto field, died quietly four months ago and has been buried without fanfare. Sears says it has liquidated stocks of the car since last June, leaving the field because it could not offer a good enough value for the money. All told, about 2,600 Allstates were sold. The cars, built by Kaiser, closely resembled the Henry J.

Usual dividend paid at this time has been passed by Lehigh Coal & Navigation Co., which also deferred action earlier on its normal June dividend. The company, which has paid dividends in every year since 1881, blamed its present action on heavy losses suffered by the subsidiary Lehigh Navigation Coal Co.

Higher standards for workers, notably women and children, will be the goal of a Southern Regional Conference in Little Rock next week. Top officials of the U. S. Labor Dept. and of a dozen southern states will discuss labor legislation, and especially the thorny question of child labor.

Private pension plans are on the rise, according to the Internal Revenue Bureau. The bureau reports having approved 3,780 pension and profit-sharing plans in the year ended last June 30, way over the 2,493 figure for the previous year. It is estimated that more than 10-million workers are now covered by such plans.



*Another example
of
efficient power
at lower cost*



Modern General Electric 70-ton Diesel-electric locomotive, powered by Cooper-Bessemer, shown hauling two retired steamers on the St. Johnsbury & Lamoille County R. R., Vermont.

THE "chug" of old steamers echoing through the hills has become a pleasant, nostalgic sound . . . perhaps . . . but it also echoes plenty of wasted dollars! That's why *these* steamers, though still serviceable, are now on their way to the scrap pile . . . hauled by their modern successor, a Cooper-Bessemer powered Diesel-electric locomotive.

This Diesel-electric locomotive is an all-purpose 70 tonner, built by General Electric. And here on the St. J. & L. C. Railroad in Vermont, as on hundreds of other short line railroads, they're finding that one of these 70 tonners easily does the work of 2 or 3 steamers . . . and at a fraction of the operating cost. Its heavy-duty Cooper-Bessemer Diesel works on month after month with a very minimum of down time, maintenance and expense. To many a railroad it has meant all the difference between red and black ink.

You don't have to operate a railroad to take advantage of Cooper-Bessemer developments in power. Cooper-Bessemers are designed for every kind of heavy-duty stationary, mobile and marine service. And it will pay you to find out about the new things being done by one of America's oldest engine builders.

Mount Vernon, Ohio

COOPER-BESSEMER

Grove City, Pa

New York • Chicago • Washington • San Francisco • Los Angeles •
San Diego • Houston • Dallas • Odessa • Pampa • Greggton •
Seattle • Tulsa • St. Louis • Gloucester • New Orleans • Shreveport
Cooper-Bessemer of Canada, Ltd., Halifax, N. S.



"HEY! YOU'RE SUPPOSED TO BE DEAD!"

"Last time I heard about you," said Tom, the paymaster, "you were under a pile of steel in the warehouse. The boys said you'd never reach the hospital alive."

"Oh, yeah?" I said. "That was five months ago. Now look through that box of yours and you'll find a paycheck for me. I've been back on the job a week."

"A miracle?" asked Tom.

"Call it that if you want. When I got out of the hospital three months ago, after they fixed up my crushed pelvis, they wheeled me into the Liberty Mutual Rehabilitation Center. Last week I walked out. But don't think I sat around waiting for miracles. They've got people there who knew just what to do for a banged-up fellow like me. Exercises, learning to walk a few steps, more

exercises... first thing you know I was climbing stairs, even running. Now I can swing my old job just as good as ever. So hand over that paycheck . . ."

Everybody gains when a badly injured worker is returned to work and normal living. He and his family gain most of all. His employer regains the services of

a loyal, experienced worker. And compensation insurance costs are kept down.

Rehabilitation is part of Liberty Mutual's Humanics program. The complete program brings together all activities for preventing accidents and for reducing loss when accidents happen. All parts of the program — Industrial

Engineering and Industrial Hygiene, Preventive Medicine, Rehabilitation and Claims Medical Service — are directed to cutting down loss in all forms.

This program can help you cut your compensation insurance costs. How . . . and how much . . . you can find out by calling or writing the nearest Liberty Mutual office. Or write to us at 175 Berkeley St., Boston 17, Mass.



We work to keep you safe

★ Better Compensation Insurance Protection at Lower Cost through HUMANICS ★

WASHINGTON OUTLOOK

WASHINGTON
BUREAU
OCT. 31, 1953



The GOP will raise the debt ceiling next year. It will be politically distasteful. But there doesn't seem to be any way out.

The Treasury can get through this fiscal year, which ends on June 30, despite this week's borrowing of \$2-billion, which pushed the debt up to within about \$500-million of the \$275-billion ceiling. Tax collections are highest in the last half of a fiscal year—will cover spending next spring.

The big hitch is the next fiscal year, 1955, which starts July 1. Hope for a balanced budget in fiscal 1955 has been abandoned. Fact is the 1955 deficit may be \$5- to \$6-billion over the debt ceiling.

You may see some maneuvering for more elbowroom under the ceiling. The Treasury can draw down its cash reserve, about \$5-billion, to cover some obligations. It has about \$1-billion of "profits" from the 1933 gold devaluation, which could be used. But these would be temporary—won't make enough room for the next year's deficit.

Plans for the new Congress session in January are forming. And without real control in either the House or Senate, the Administration will go pretty far to court Congress—deal it in at the start of negotiations.

President Eisenhower will bid strongly for bipartisan support on key issues. In the next two months, he will see a great deal of the leaders in Congress—Democrats as well as Republicans. As yet, Taft has no strong successor.

Taxes are one example of how the Administration realizes that it can't go far in Congress next year without bipartisan support.

There will be a big cut Jan. 1, when the excess profits tax and the 10%, average, Korea boost on individuals go off—about \$5-billion in revenues will be lost.

The Administration did want to make this up—much of it, at least. That's when the sales tax ideas got into the news. The political reaction was swift. Republicans moaned and the Democrats whooped. Then Eisenhower disavowed any idea of a retail sales tax. He left the door open to a general manufacturers' excise, which is a sales tax, but not at retail. The fire now is centering on this and it gets hotter daily.

Now tax plans have been completely revised. The word has gone out that any program developed will be worked out jointly by the Treasury and the staff of the Joint Congressional Committee on Taxation. And what's more important, no bill will be sent to the Hill until Congressional leaders have had a chance to state their views. Betting is that Democrats also will get a preview.

The talk is compromise—of how to change taxes and protect revenue. You may well end up with a 50% corporate rate and rearranging of excises to provide a more uniform rate on most goods and services. This would net an increase in revenue. But it would be traded off against other revisions—more liberal allowances for individuals, and incentives to investment, such as some relief from the double tax on dividends.

The farm issue is another example of the White House approach.

WASHINGTON OUTLOOK (Continued)

WASHINGTON
BUREAU
OCT. 31, 1953

There's politics in this one, too. But nothing more than normal. The Administration is pulling a switch. It has let Agriculture Secretary Ezra Taft Benson run loose, talking about all that's wrong with the high-level price props. Many farmers and most nonfarmers agree with Benson—it's a bad system. But denouncing the system is bad politics, when you offer nothing better. Eisenhower will back the high supports, with "refinements."

The issue of beef cattle price supports wasn't settled this week. Secretary Benson turned the cattlemen down. Now the pressure will center on Congress to write the supports into law.

—•—

Washington will leave more room for states in labor disputes. This seems sure, regardless of what happens on the Taft-Hartley issue.

The NLRB is pulling in its jurisdictional horns. That is the National Labor Relations Board, which administers the Taft-Hartley act. Eisenhower is changing the board's make-up, with these results:

"Local businesses" and "small businesses" will be ruled outside the jurisdiction of the board. And that has nothing to do with what Congress will or won't do on Taft-Hartley. Eisenhower is building up a majority on the five-member board. The result is a disposition to cut down on the interpretation of the board's jurisdiction.

Less "moving in" by Washington on other labor fronts seems sure, too. The Federal Mediation & Conciliation Service will pull in its horns.

That will give the states more chance. Many states don't have laws covering labor-management relations. And some of those that don't have the idea local laws aren't necessary—Washington will move in. Now they will have to reconsider.

—•—

A freeze of the social security payroll tax rate at the present 1½% on employers and employees may be voted in January. The rate goes up to 2% Jan. 1. Any freeze action probably will be retroactive.

Higher unemployment compensation may get through Congress next year. It will be an offset to higher living costs. This may get White House support.

—•—

Eisenhower's antitrusters want more subpoena powers. The Justice Dept. will ask Congress for authority to subpoena company records and officials without going through the present procedure of first making charges before a grand jury. Idea is to have cases better prepared before going to court.

Plans to negotiate more antitrust settlements are running into snags. Chief trustbuster Stanley N. Barnes is settling cases through consent decrees. This can avoid long and costly litigation. But he finds it hard to deal with alleged violators unless formal charges are made in the courts.

—•—

Washington took a new look at business prospects this week, but came up with no new conclusion. The consensus at the annual agricultural outlook conference, which brings extension workers together with Washington officials, was that business will be in a downturn next year. The majority held the view that the slide-off won't be steep, on the average, although some lines will be hit pretty hard.

Copyright copyrighted under the general copyright on the Oct. 31, 1953, issue—Business Week, 230 W. 42nd St., New York, N.Y.

READ

how you can benefit by JESSOP'S great product variety

Hopes for the future notwithstanding, Jessop lays no claim to being the largest specialty steel maker in America, but careful check shows it to be the most diversified. We produce the greatest variety of special steel products, shapes and sizes available anywhere. There's a profit story in this for Jessop and for you, too. We profit by spreading ourselves across a greater segment of industry. Like a modern investment trust we avoid the ups and downs of vertical markets. Our current sales success proves the point. You can profit if you come to Jessop for more of your requirements and obtain the service and delivery advantages that single-source purchasing affords. What's more, you'll enjoy doing business with the Jessop team . . . aggressive men eager to earn their salt by helping you in your business. Check the list on this page and pick more products to buy from Jessop. You'll be glad you did.

Products

- STAINLESS STEELS
- HIGH SPEED STEELS
- HIGH ALLOYED STEELS
- HIGH SPEED TOOL STEELS
- HEAT RESISTING STEELS
- STAINLESS-CLAD PLATES
- ROLL STEELS FOR SPECIAL PURPOSES
- CARBON AND ALLOY STEELS
- CAST-TO-SHAPE TUBE STEELS
- HIGH SPEED AND ALLOYED RAW STEELS
- FLAMED AND BURNED STEEL
- COMPOSITE HIGH SPEED STEELS
- STAINLESS-AND HEAT RESISTING CASTINGS
- COMPOSITE ONE STEEL MALLEABLES
- PRECISION ENGINEERED FLAT STOCK
- DIE STEELS—HOT AND COLD WORK

JESSOP

STEEL COMPANY • WASHINGTON, PENNSYLVANIA

*1 1/2"-18 Flat Head
Silicon Bronze Wood
Screw. One of 7,000
Stock Items.*

end corrosion with **HARPER** everlasting fastenings

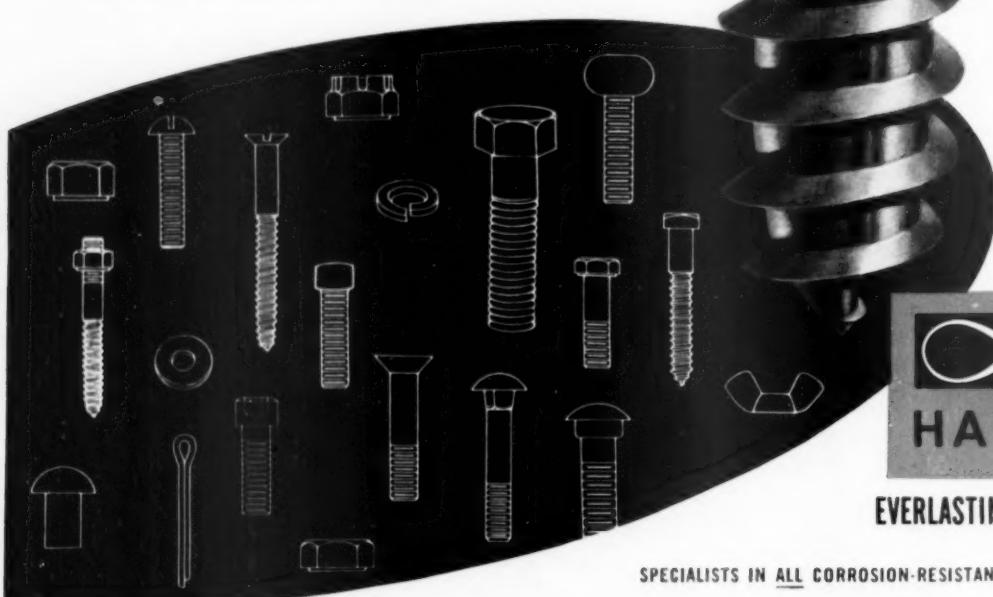
From the day the equipment you manufacture leaves your plant, corrosion begins its work of destruction. It may be slow if atmospheric conditions alone are encountered, or rapid if salt spray, caustic chemicals or acids affect its operation.

Many manufacturers find that the small additional cost of corrosion-resistant fastenings is good insurance on their equipment. Fastenings of brass, silicon bronze, naval bronze, copper, nickel, aluminum, Monel or stainless steel last longer—prevent breakdown—improve appearance and salability.

The H. M. Harper Company is the largest manufacturer specializing in fastenings of corrosion-resistant metals. Over 7,000 items are carried in stock—one order to write—one account to keep—one bill to pay.

There is a Harper Branch office or Distributor near you with stocks ready to fill your order. Consult with Harper metallurgists and engineers on any tough corrosion problem you may be facing.

THE H. M. HARPER COMPANY
8225 Lehigh Avenue, Morton Grove, Illinois



BRASS
NAVAL BRONZE
SILICON BRONZE
MONEL
NICKEL
ALUMINUM
COPPER
STAINLESS STEEL



EVERLASTING FASTENINGS

SPECIALISTS IN ALL CORROSION-RESISTANT FASTENINGS

MARKETING



← Investment banker Paul Mazur set keynote of Boston Conference on Distribution—the new role played by marketing men.

- It's based on the idea that consumers' demands can be built up to keep industry's wheels turning.
- Consumer demand built the enormous postwar market, can carry the economy over difficult days ahead, say marketing men.
- And marketing is the force that can keep consumers spending—and wheels turning.
- These are the ideas that marketing men see as the guiding principles of ...

Preaching a New Consumer Economics

This year's Boston Conference on Distribution was the most significant in the history of that annual event. For 25 years Daniel Bloomfield, manager of Boston's Retail Trade Board, has been gathering together every autumn the more famous names in business, finance, and government for marketing's most glittering event (BW—Oct. 18 '52, p. 46). Last week he outdid himself. In putting together a quarter-century look at distribution, Dan Bloomfield succeeded in ushering in a new era for the marketing man.

Up to now this marketing man has usually been regarded as playing the part of a passive agent in the economy, distribution as merely the channel whereby goods are brought to people.

But in Boston's Hotel Statler last week, marketing men began to take on for themselves the leading role in the economy. This, as someone said at the conference, is the Age of the Consumer. To fit the needs of this age, marketing men are developing something that can be described as Consumption Economics.

• **Ruling Factor**—Just what that is is best described in the words of Paul Mazur, partner in the investment house of Lehman Bros., who was given a special award at the conference for his contributions to marketing. His new book, "The Standards We Raise," served as text for a considerable portion of this year's conference; in it, Mazur states that "not purchasing power but purchases, and not production but con-

sumption, are the ruling factors in our economy." He calls this a nation "that consumes its way to property, security, prosperity, and freedom."

At Boston he reiterated his thesis: "The true catalyst of our mass markets is the standard of living which the American people demand and which they satisfy with goods and services. When we multiply the number of consumers by the bill of materials which the average family's standards demand, there results the mass market, which distribution serves and for which industry can produce safely."

• **Primary Role**—The Mazur theme was played, with variations, by others at Boston. Malcolm P. McNair, of the Harvard Business School, made this point:

"Instead of thinking about distribution as being secondary and subsidiary to production, we ought to recognize that it is often distribution which comes first and creates the opportunities for production."

• **Moving Force**—The idea that consumption is a vital factor in the economy is hardly new in economics. What is new is the premise that you can actually do something about it. In other words, the consumption economist believes that consumption is not merely a derivative of income, that it does not have to be rigidly nailed to the level of income. At any level, consumption can vary, according to the prevailing standard of living, to the wants and desires of people, to their

willingness to use credit. And marketing men by the same token can be prime movers in effecting such changes.

Marketing men are so taken with their new creative role that they even want to change some of the ground rules to fit it. At Boston, a committee of marketing economists from major U. S. companies delivered a report. It argued for the abolition of the phrase "cost of distribution" and its replacement with "value added by distribution" as the counterpart of "value added by manufacturer."

• **The Consumer's Power**—The consumption economists differ from other economists mainly in emphasis. Like everyone else, they see that our extraordinary mass production machine running full blast in a static economy will of necessity create a glut of goods that will in turn create unemployment. The consumption economists see the consumer as the man who will save the situation. Give him the goods he wants, says Mazur, and the market will expand as needed:

"Americans have, and believe in, the political philosophy that all people are created equal. They believe themselves entitled to the same living standards as their neighbors and neighbor's neighbor. They demand as today's necessities yesterday's luxuries. Class possessions quickly become mass demands."

Conservative economists may stress the vital importance of capital expenditure in keeping the wheels turning. Some of the Keynesians, despairing of

NEW heat-treating



No guesswork in Brad Foote's modern, completely new heat-treating department. Note control panels with recording instruments.

Heat-treating of gears is a science. It can bring out the ultimate of service life offered by quality alloys. Good heat-treating is dependent upon knowledge of heat-treating processes and skill in using fine heat-treating equipment.

• Illustrated above is part of BRAD FOOTE'S new \$500,000 heat-treating department with modern equipment that removes the element of chance from a sometimes fallible job.

Precise control equipment assures exact temperatures and timing—which means unvarying conformity to hardness specifications.

• The best in heat-treating at BRAD FOOTE is but another step in our complete control of the quality of every BRAD FOOTE gear, gearmotor, reducer, and transmission. It is your guarantee that you'll get satisfactory service if you use the gears yourself or build them into your equipment for use by others.

No one shares our responsibility.

• We'd like to discuss your gear requirements.

BRAD FOOTE GEAR WORKS, INC.

Bishop 2-1070 • Olympic 2-7700
1309 South Cicero Avenue • Cicero 50, Illinois



subsidiaries

AMERICAN GEAR & MFG. CO. • PITTSBURGH GEAR COMPANY
Phone: Lemont 920
Lemont, Illinois

Phone: Atlantic 1-9950
Pittsburgh 22, Pennsylvania

stabilizing investment, give the dynamic role to a beneficent government. But the consumption economists hand it right over to the consumer.

The power of his demands built the enormous postwar market for cars, houses, appliances. Translated into still further goods, they say, it will carry the economy over those difficult days when defense spending slackens off.

• **Immediate Target**—Fred Lazarus, Jr., head of Federated Department Stores, brought the discussion down to the ground by setting a target for right now. We will have to sell next year, he figured, "about 9% to 10% more consumer goods and services than the estimated \$230-billion" this year.

Can the job be done? If so, how?

Not, certainly, by advertising and the "hard sell" alone. Most of the speakers noted the need for salesmanship, both printed and verbal, then passed on to other things.

• **Longer Future**—Lazarus stressed the hopeful long-range conditions we face—in general, the same ones that have built the extraordinary American market of the past few years: the increasing population; the backlog of savings; the higher income and its distribution over a wider range of the population than ever before; the new plateau of living standards.

Mazur himself singled out other factors. He noted the effect of new inventions in developing new markets, the purchasing power unleashed by fractional (or installment) selling, the unloosing of whole new areas of demand through the growth of leisure time. He also dwelt on the explosive effect decentralization has had on the economy in terms of the demand for more cars, new shopping centers, new homes, more roads, and the like.

• **Stimulate Buying**—McNair pointed specifically to some concrete things retailing can do to stimulate consumption. Bring stores to people. Keep up with "the modern tempo"—for example, feature leisure-time goods. Make it easier for people to shop by keeping open at night, by packaging things better, by making it easier in general for people to get at goods physically.

B. Earl Puckett, head of Allied Stores Corp., added another thought. Efficiency is all right, he said, but the really important thing is to dramatize retailing, get some excitement into it. He wanted to recapture the flair of the great merchants of the past—the Marshall Fields and John Wanamakers—who were "masters in the art of obtaining desired emotional reactions from customers."

• **Testing a Theory**—Will such devices do the trick? Can we, in short, keep the economy permanently hoisted up by pulling at our own bootstraps?

The theory may never be tested in

RYAN FIREBEE

...it lives fast and dangerously!



To keep our air and ground defenders' shooting sharp is the job of the Firebee, America's new high-performance pilotless jet plane. A product of Ryan Aeronautical Company's advanced aeronautical engineering, the Firebee was developed as a joint project of the U. S. Air Force, Army and Navy. It is now being manufactured for use by all three services.



The Firebee carries no human pilot, yet this remote-controlled target plane has phenomenal performance like a modern fighter. It is launched either from the ground or from a "mother" plane and is recoverable by a highly efficient parachute system that lowers it gently to the ground.

Design and development of the Firebee demanded the highest level of scientific talent and technical ability—in the aerodynamic, structural, mechanical, metallurgical and electronics fields. In this latest proud accomplishment, Ryan drew on rich experience gained through its 31 years in the forefront of aeronautical progress.

Because Ryan is *specialized, ingenious and versatile* . . . because it is an integrated company with superior abilities in many specialized fields, Ryan is better prepared to accomplish the unique, difficult technical engineering and production assignments of today's high-speed air age.



RYAN

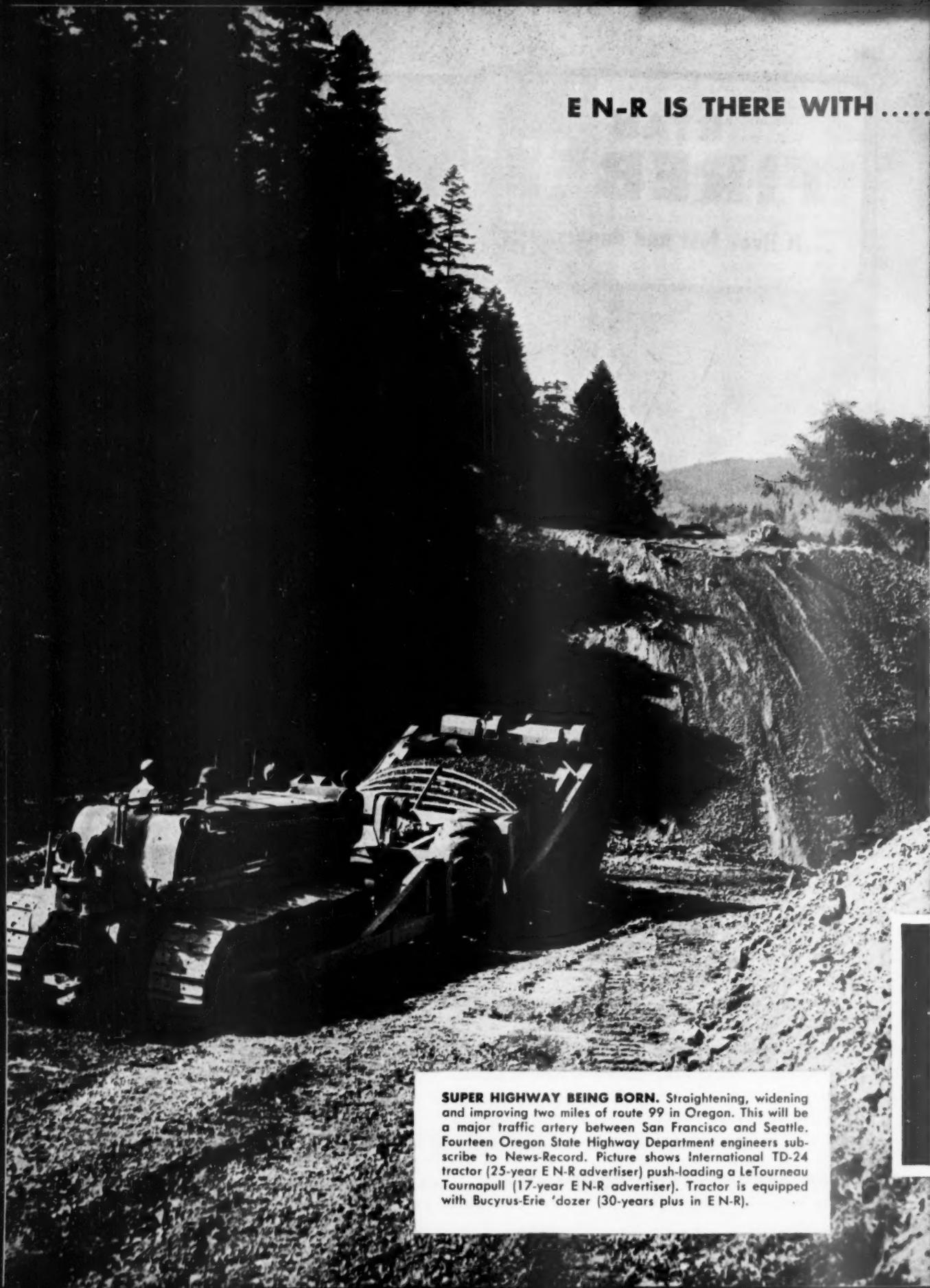
* SPECIALIZED * INGENIOUS * VERSATILE

Advanced-type Aircraft and Components
Jet and Rocket Engines and Components
Exhaust Systems for Aircraft
Electronics Equipment
Ceramics for "Hot Parts"
Weapons Systems Design and Management
Aircraft and Power Plant Research
Metallurgical Engineering
Thin-Wall Ducting
Firebee Pilotless Jet Planes

Pioneers in Each * Leaders in All

RYAN AERONAUTICAL COMPANY • Factory and Home Offices, Lindbergh Field, San Diego 12, Calif.
OTHER OFFICES: WASHINGTON, D. C.; DAYTON, OHIO; SEATTLE, WASHINGTON; NEW YORK CITY

E N-R IS THERE WITH



SUPER HIGHWAY BEING BORN. Straightening, widening and improving two miles of route 99 in Oregon. This will be a major traffic artery between San Francisco and Seattle. Fourteen Oregon State Highway Department engineers subscribe to News-Record. Picture shows International TD-24 tractor (25-year E N-R advertiser) push-loading a LeTourneau Tournapull (17-year E N-R advertiser). Tractor is equipped with Bucyrus-Erie 'dozer (30-years plus in E N-R).

.....Construction Men: Nation's Biggest Consumers

In 1953, construction men will buy nine-tenths of the nation's entire cement production, one-third of its copper, one-sixth of its iron and steel, one-fifth of its lead, one-fifth of its zinc, and two-thirds of all its lumber. This makes construction men the biggest consumers of materials in the nation's economy.

These materials will pour into projects like these. Each project will be unique—will never have been done before, will never be done again under the same circumstances. New and unique problems will pop up—in labor relations, in logistics, costs, governmental dealings, legal tangles, financing, equipment use, materials availability and so on.

But all of these new problems will be licked by the same type of people, applying the same fundamental principles, and using the same materials and equipment. Thus, each project, though unique, becomes really just a re-shuffle—a new combination of many common elements.

One of these common elements wherever men are building is the weekly copy of Engineering News-Record. Because it reports *all* the news, of *all* the forces and factors that are construction, it's the only publication that helps these heavy-spending men with *all* their problems, on *all* their projects. That's why, wherever or whenever buying decisions are made, E N-R is there.

Consistent advertising in Engineering News-Record can help pre-sell your product before a project is even announced and continue to sell all through the construction process.

E N-R Is There—Are You?

POURING 2,800,000 CU. YDS. of concrete was round-the-clock work at TVA's Fontana Dam where 66 News-Record subscriptions help the contractor and engineer. Tennessee Valley Authority gets 118 copies of EN-R each week.



WORKING CAPITOL.

It was business as usual at the Capitol Building in Washington as a new roof went on the wings. E N-R was there each week with 20 paid subscriptions. In renovating the White House, 32 E N-R subscriptions went to contractor, engineer and architect. The Public Buildings Administration, owner of these two landmarks, gets 8 copies of E N-R.



CONSTRUCTION MEN PREFER E N-R—Architect-engineer consultants specializing in buildings also do airport and unclassified construction work. Worked in four widely separated states last year. Management surveyed its own personnel as to reading habits. Here are results:

1st Choice	Total Votes
ENGINEERING NEWS-RECORD	
	1st ARCHITECTURAL PUBLICATION
	2nd ARCHITECTURAL PUBLICATION
	1st SPECIALTY TRADE PUBLICATION
	3rd ARCHITECTURAL PUBLICATION
	2nd SPECIALTY TRADE PUBLICATION
	1st POWER PUBLICATION
	1st ELECTRICAL PUBLICATION
	2nd CONSTRUCTION PUBLICATION

Surveys made by 30 other important construction firms show EN-R to be most preferred publication.

ENGINEERING NEWS-RECORD

A McGRAW-HILL PUBLICATION—ABC—ABP
330 West 42nd St., New York 36, N. Y.



a New Auto-typist to Benefit your Business

New Auto-typist Model 30-54
has 30 push buttons for
automatic selectivity of
30 letters or paragraphs.

Now, by Pushing Buttons dictating and office correspondence bottlenecks can be reduced or eliminated entirely. The Auto-typist method of automatically typing pre-composed letters will not only reduce typing time, but more than double correspondence output and efficiency without requiring extra typists.

The Personal Touch—Well over half of general office correspondence is routine. Order acknowledgments, answers to inquiries, promotion letters and the like that must be manually typed, can be prepared by Auto-typist $2\frac{1}{2}$ times faster than any typist, and without error. Yet they are as personal as your signature.

Simple, Easy to Use—Salutations are manually typed. Then by pushing the button or buttons that correspond to the

letter desired, Auto-typist takes over and types it. Manual insertions of personal data can be made in any part of the letter. No proofreading is necessary and you get perfectly typed letters every time.

Large or Small offices can benefit by Auto-typist, for there is a model to suit your particular needs. Hundreds of businesses, such as banks, insurance companies, stores, industries, publications and small 1-girl offices, are using Auto-typist equipment efficiently and effectively. Why not get complete information today on how Auto-typist can benefit your business.

Auto-typist

AMERICAN AUTOMATIC TYPEWRITER CO.
World's Largest Manufacturer of Pneumatic Typing Machines

Mail
attached coupon
today for
complete
information on
Automatic Typing

AMERICAN AUTOMATIC TYPEWRITER CO. 910-D
614 North Carpenter Street, Chicago 22, Illinois
Name _____
Company and Title _____
Address _____
City _____ Zone _____ State _____

"...there can't be a short-circuit or the theory won't work..."

CONSUMER ECONOMICS starts on p. 41

full, at least not in our time. The Administration, bowing to the needs of the time, seems to have reached the conclusion that heavy defense spending, high taxation, and an unbalanced budget are with us into the foreseeable future (page 29).

At the most we appear to be dealing with something about the size of Lazarus' reckonings.

• **Doubts**—Actually, despite public confidence at Boston, there were some private doubts—some of them expressed by the adherents of the Mazur doctrine—that the theory is as workable as it appears on the surface.

• **Preventing a Short Circuit**—The consumption economists rely on a completed circuit between producer and consumer. Consumption must equal production of consumer goods. There can't be a short circuit or the theory won't work. But there is always a potential short circuit in the form of consumer savings. What if the consumer blocks the flow of goods by saving too much money?

What if there is a downturn in the economy? What if consumer earnings fall off? How will he react to this?

Consumer psychology, as we well know now from the studies carried on at the University of Michigan (BW—Oct. 3 '53, p146), can be the controlling factor in the economy. Furthermore, there is reasonable certainty that the consumer, who bases his spending plans both on his earnings over the past few months and on his long-range prospects, might well sock away a lot of his money for a rainy day. And that could make the short that blows out the main fuse.

The timing is all-important. Can the consumer be prodded into spending before he starts slowing down the economic machinery?

• **Business, Too**—The second uncontrollable factor in the picture is the businessman himself.

Like the consumer, he reacts—and not always rationally—to the new conditions. A downturn in the economy can also send the businessman to cover. Instead of boosting his advertising appropriations in the face of sliding sales, which would appear to be the sensible thing to do, he tends to cut them back to trim costs. Economists may deplore this. Advertising agencies may inveigh against the practice. But there is no indication that the businessman will mend his ways when he is forced to take action.

Your business is in the Age of Electronics

10 seconds—all that's needed for production workers to find unseen flaws in grinding wheels—or OK the wheel for shipment. Resonant frequency tells the story—worker reads the answer on one meter, one dial.



Whether quality control or product research,
electronic tests may save time, cut costs...

Comparison of resonant frequency sounds complex. Actually, it's a fast, accurate way manufacturers use electronics to inspect, detect flaws, maintain quality in mass-produced products.

Metal castings, concrete or masonry, ceramic or plastic objects, wood laminates—all may be competently inspected by your non-technical personnel using electronic equipment. Tests take only a fraction of the time formerly required; products are not marred or damaged.

Hewlett-Packard is a pioneer and world leader in electronic test instruments—basic measuring tools used in resonant frequency testing and many other manufacturing, research, communication and military applications. Each application differs; -hp- factory-trained engineers can tell quickly whether our instruments can help you enjoy better engineering and production. Write today for information, giving details of your measurement problem.



ELECTRONIC MEASURING
INSTRUMENTS

H E W L E T T - P A C K A R D C O M P A N Y

395-B PAGE MILL ROAD • PALO ALTO, CALIFORNIA

FOOD

MILK

ICE

Womack's



Drive-in grocery stores in Texas and nearby states are where you go when you need a few items



... Pull up and tell the man



... he'll get it for you



... bring it and you're off

Drive-ins Thrive on Supermarket

It sometimes seems that about the only thing you can't do on wheels these days is ride a horse. You can eat, watch a moving picture, cash a check, have your car washed, return a library book, in some parts of the country even go to church—all without stepping from your automobile. In Texas, you can also do your marketing this way.

Drive-in groceries is their name, but curb service describes them better. The customer drives up to the store—it's a three-wall affair, with the fourth wall open to the street—a clerk comes out, takes her order, brings it to her, takes her cash, and she's off.

Some drive-in groceries have been around for 25 years or better. In the past few years, though, they have mul-

tiplied like rabbits. It's quite likely that they will be localized in the South. It's highly unlikely that they'll ever threaten other stores as drive-in theaters have threatened motion picture houses. But they show how one strong trend—economic or social—often sets up another trend, in the opposite direction.

• **Thriving on Its Opposite**—Basically, the drive-in grocery thrives on that major development of present-day retailing, the supermarket. "The bigger the supermarkets get, the more drive-in groceries a city can support." So says one drive-in operator. Others agree that the two thrive side by side, not because they compete, but because, being so different, they complement each other.

The drive-in operator has no illusions that he'll ever get the bulk of the household marketing; the supermarkets have that wrapped up. The supermarkets depend on the multipurchase customer, the impulse buyer, the once-a-week shopper. The drive-ins shoot for just the opposite: the pickup and fill-in items—the dog food the housewife forgot to buy, or the milk she ran out of unexpectedly. Ordinarily, three items is the tops that a drive-in sells to a customer—an average of 50¢ worth of merchandise.

There are other differences. Whereas the supermarket keeps service to a minimum, the drive-in builds it up. The supermarket's great pride is its low prices; drive-in prices run higher—some



R-S HEAT TREATING FURNACES

in a hurry. You just . . .



. . . again. That's why the . . .

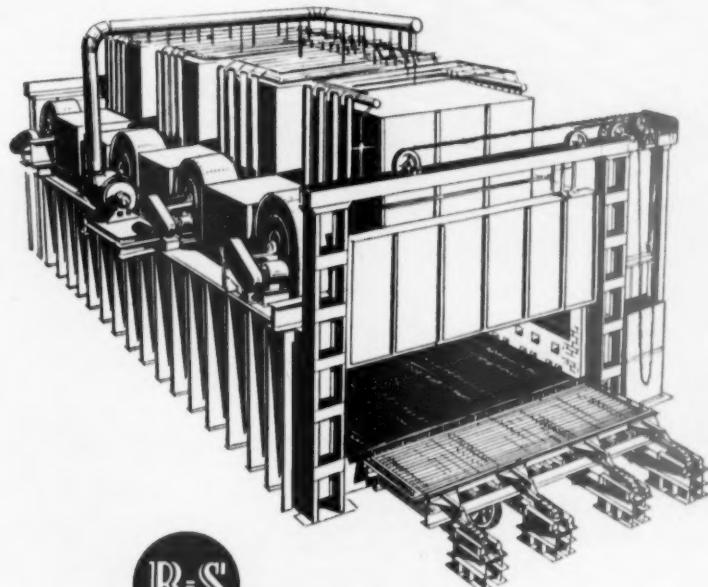
Crumbs

drive-ins figure they're about 3% higher though there's no over-all figure available.

• Fast—In Texas and nearby states, drive-ins are blooming on these tactics. Their strongest selling card is their convenience.

At the top of the convenience list is fast service. Orders are short, so there's no long wait at a checkout counter. "Supermarkets are too super for the housewife who plans to spend only a dollar," says one drive-in owner. "She'd rather pay a penny or two more and get through in a few minutes."

Take the case of one Houston drive-in last summer. A supermarket sold soft drinks, just across the street, at a bargain—six bottles for 13¢. Yet the



***industrial heat
treating furnaces
are custom-built
with the know-how
of forty-five years
experience***

Many of America's leading companies use R-S Furnaces for hardening, annealing, drawing, normalizing, homogenizing, and aging, as well as in the preparation of many types and kinds of metals for such subsequent operations as rolling, forging, piercing, forming, extruding and brazing.



R-S FURNACE CORPORATION
A Subsidiary of Hardinge Co., Inc.

4555 GERMANTOWN AVENUE
PHILADELPHIA 44, PENNA.

Steel When Needed

for the makers of
"RALEIGHS," "VICEROYS" and "KOOLS"



Meeting the construction schedule for this plant-expansion project left no margin for delay. Because meeting demands for their fine tobacco products—hitting new highs saleswise month after month—made an immediate increase of productive facilities a "must" for Brown & Williamson Tobacco Corporation.

That in turn demanded delivery on-the-double of structural steel. And that's International's specialty! Each shipment of the 340-ton order was on the job, timed to meet erection deadlines. Each reached its destination in good order, exactly as ordered. Within two weeks after International's first delivery, this big tobacco plant was growing... fast!

Quick, accurate fulfillment of structural steel contracts... with economy always a prime consideration... is one of many steel fabrication services offered you by International. So, whatever your needs or however tough your particular problem, write and tell us the details. No obligation, of course.



1965 EDGAR ST. • EVANSVILLE, IND.

INTERNATIONAL STEEL COMPANY

drive-in did a thriving business selling the same drink at six bottles for 25¢.
• **Early and Late**—Curb service is convenient in more ways than one. The woman who finds she needs cream for breakfast can tuck herself into her housecoat and take off to the nearest drive-in. Since she doesn't have to get out of the car, it doesn't matter how she's dressed.

The drive-ins are open for the breakfast market, too. Most of them do business from 7 a.m. to 11 p.m. for seven days a week. In fact, they do a rush business just before closing time—in beer, ice cream, soda, and the like. On weekends, they are busy with picnic items.

• **Extras**—Convenience is a service in itself. Drive-ins, though, don't stop with that. They cash checks for customers, sell all their drinks ice-cold (many of them sell ice, too).

On merchandise, the drive-in practically duplicates the supermarket, except for one big difference. Where a big self-service store carries seven or eight brands, the drive-in carries one or two. Brands don't matter so much when the ham is about baked and you have no mustard.

Soft drinks, crackers, baby food, bread are big items. Some drive-ins, extra fancy, have licenses that allow customers to drink beer on the premises. Some have TV sets. In Dallas, Cabell's Minit Markets and the 7-Eleven chains have toys to keep children busy. Others frown on this practice, though. The idea, they say, is to get people out fast, not keep them sticking around.

• **Profits**—On an average purchase of 50¢ it might seem that profits would be skimpy. Operators say, quite the contrary. One owner figures he makes five cents on every dollar. Another says, "They would gasp up North if they could see our profit sheet."

Undoubtedly the higher prices help a lot here. And drive-ins rarely have sales, loss leaders, or specials of any kind. Neither do they advertise in the newspapers, except for some institutional promotion.

It takes relatively a small amount of capital to get into the business. The average drive-in is small to begin with—about 1,800 sq. ft. against 20,000 sq. ft., say, for a supermarket. It might cost \$40,000 to \$50,000 to set up in business complete—building, equipment, and stock. And that stock turns over fast. A Houston operator reports his stock turns over 24 to 28 times a year. Operating expenses run low, too. Small staffs are the order; anywhere from two to eight people can handle the business.

• **Jumping In**—Because it's profitable, a lot of people have gone into drive-in selling in the past few years. Nelson T.

One demonstration, and key men agree

NEW Scott Industrial Wipers



**are better than anything they've ever used
for most industrial wiping jobs.**

We expected that years of testing and research had made this a good product. Still, we never thought that Scott Industrial Wipers would catch on so quickly with so many key men in so many different kinds of plants.

Scott Industrial Wipers have only been on the market a few months. But, already, Plant Managers and Superintendents, Industrial and Methods Engineers, Production Supervisors, Head Storekeepers, Purchasing Agents—as well as the workers themselves—have been enthusiastic about them. Here's why:

Safety

Scott Wipers are disposable. This means that harmful filings, oils, and shavings are thrown away, along with the used wipers. Clean edges reduce chances of catching in moving machinery.

Cleanliness

Because a new clean one is always available, you can have a wiper free from chips and foreign matter thus helping eliminate the carrying of dermatitis.

Uniformity

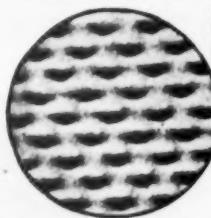
Each wiper is of standard size, color and absorbency. Every inch is a highly effective wiping surface. From experience you will soon know the exact wiping requirements of each job.

Versatility

Soft but strong, Scott Industrial Wipers tackle almost any job . . . from oil wiping and glass wiping to polishing and use on the face and hands.

Cost control

Naturally, with sorting and counting eliminated, expensive controls are no longer necessary. Wiping now can be a budgeted production operation.



Close-up of wiper surface showing "PERF-EMBOSSED" texture which grips dirt and assures thorough cleaning

Most plants have found a 90-day trial—with a Scott representative working hand in hand with their supervisory personnel—the most accurate way of measuring the advantages of Scott Industrial Wipers.

BW-A

For further information, fill out the coupon and mail to Scott Paper Company, Chester, Pa.

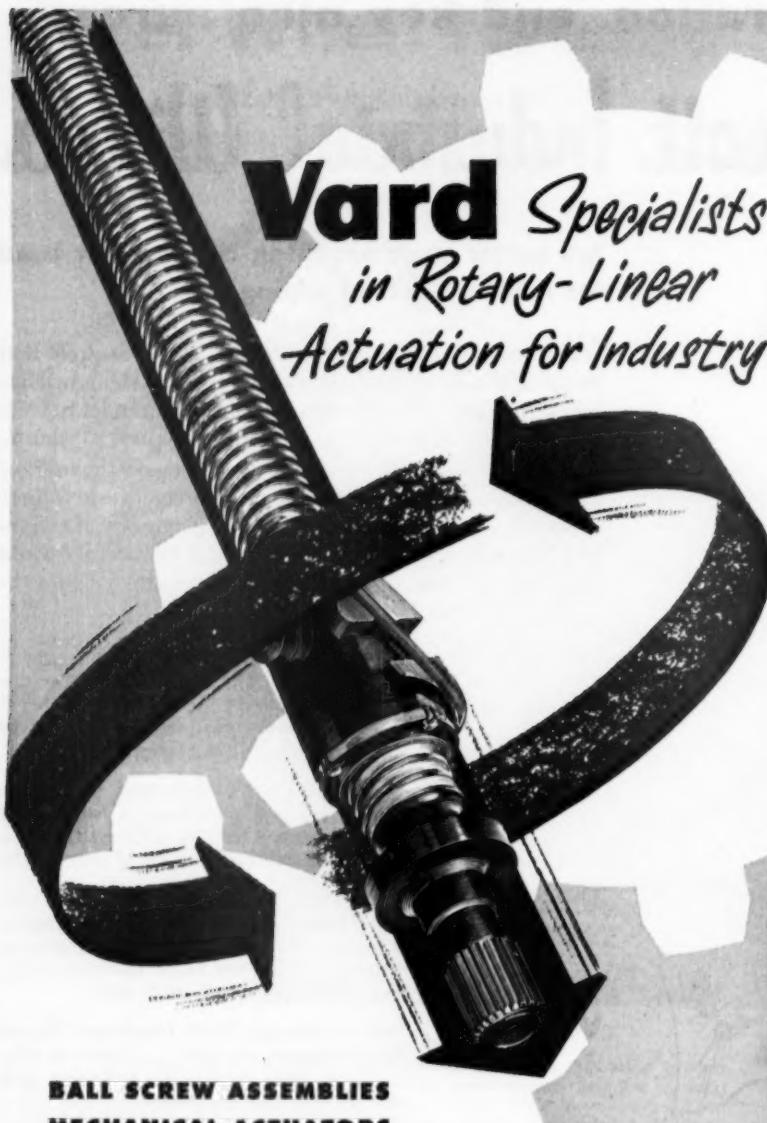
Name _____

Position _____

* Company _____

Address _____

City _____ State _____



Vard Specialists in Rotary-Linear Actuation for Industry

**BALL SCREW ASSEMBLIES
MECHANICAL ACTUATORS
HOURGLASS WORM SETS
FRACTIONAL H.P. MOTORS**

Vard Ball Screwjack assemblies are applicable to all specifications calling for transmission of rotary motion to linear motion. Efficiency curves up to 97%, with power reductions of as much as 66 per cent, are possible. Let Vard engineers help solve your problem.

Send For The
VARD
Brochure
Today



Vard

2931 E. COLORADO STREET
PASADENA 8, CALIF.

Womack, Jr., is a case in point. A petroleum engineering graduate, fresh out of school, he drove around Houston trying to figure out what to do with his degree. After watching the swish of cars in and out of drive-ins, he made up his mind. He got into the business in 1949, today has five stores doing a \$750,000 gross a year.

Another example is B. F. Beaman, president of Midget Markets in Houston. He had been in the ice cream business for years. He started his first drive-in in 1949. Today he has five, doing over \$800,000.

In Dallas, the story goes that the drive-in grocery idea started in that city in 1927. The operator of an ice relay station for Southland Ice Co. found he had a lot of calls for milk, eggs, and bread from people who came by for ice. He started to invest his money in food items. Then J. C. Thompson, a Southland Ice official, bought control of the firm, and converted the company's other ice stations to food outlets. That was the beginning of the Totem stores. In 1944, Southland Ice changed the name to the catchier 7-Eleven ("Open at 7, close at 11").

- **Spreading Out**—Today, 7-Eleven is accounted the biggest drive-in grocery chain in the country. It has 127 stores now. A lot of other drive-in operations have sprung from the Totem idea and have adopted similar names: Hi-Way Totem, Let-Us-Totem, Park-and-Takem, Toot'N Tell'um, Pik-N-Pak, and the like.

Another big chain is U-Tote'm, of Houston; this one has 30 stores in operation, with 11 more to be built within the year.

The "tote 'em" theme has changed its significance over the years. In the beginning, it referred to the fact that it was a cash-and-carry business—the customer did the toting. Now it's playing on the fact that the clerks tote, while the customer sits.

- **Best Spots**—For all it sounds simple, getting into the drive-in business is tricky. The big problem is picking the right store location. "That's 75% of the battle," practically all the big operators agree.

Everyone has his own idea on the right location. Some like a small shopping center. Others like the big shopping center that may have a supermarket; in that case, the drive-in will stay at the fringes and pick up the crumbs of the trade.

Some have an aversion to a location near beauty shops, theaters, and the like. The same people park too long there for their comfort. Others shy away from stoplights; such spots are too busy, they think. Still others think filling stations or bus stops in residential areas make ideal locations.

(Advertisement)

A REPORT FROM THE LABORATORIES OF REMINGTON RAND

Electronic developments for business and science

Much of the popular talk about "giant brains" has actually obscured the work which electronic computing systems are doing now . . . to answer the pressing problems of business record keeping and control as well as scientific and mathematical computations.

An electronic computer system can process a large volume of data faster and more economically than any other method. Only one operation is required for a complicated program of computing, selecting and filing information. Routine decisions can be made automatically on the basis of instructions given the system. Exceptional conditions requiring management attention can be automatically signaled.

Remington Rand presents here some practical electronic devices which may be applied profitably today by business and science:

High-speed tallying

This Fac-tronic storage system is a new Remington Rand development. For John Plain & Co., a large wholesale mail order firm, it produces up-to-the-minute inventory analysis by item under the most demanding conditions of seasonal and shifting demand. Just ten order clerks—working at 10-key input systems to a magnetic drum memory—can provide accurate tallies of orders for 12,000 different items; make available complete tallies each day or anytime needed; and accommodate approximately 80,000 order lines per day.

Punched-card computers

New standards of speed and simplicity in punched-card procedures have been set by our new Punched-Card Electronic Computer. This system eliminates many time-consuming operations on other machines . . . produces complete cards which are ready for immediate tabulation of records and reports.

Big electronic computers

Remington Rand offers two distinct families of big computing systems: The UNIVAC all-purpose system is designed primarily for business record keeping; the ERA 1101, 1102 and 1103 general

Solving problems today!

Right now, electronic systems are working economically on such practical tasks as—billing and accounting, statistical reports and forecasts, planning studies and scheduling, production and inventory control, payroll and cost accounting records, pricing analyses, engineering design and many data-reduction applications.

purpose systems are designed for scientific or mathematical computations.

Outstanding UNIVAC features are: processing of alphabetical as well as numerical data without special coding and decoding operations; high speed in sorting, collating, and filing as well as computing and decision making; tremendous speed of input and output by magnetic tapes; and built-in circuits for automatic self-checking, unique among large-scale data handling systems.

ERA systems have an enviable record for high speed solutions to complicated mathematical problems such as data reduction, systems simulation, planning studies, and control in real time. The new ERA 1103 provides very high internal speed, large storage capacity, and flexibility to surpass other systems of the same character. The 1103 also provides versatility of input and output—by teletype tape, magnetic tape, punched cards (80 or 90 columns), line printer, electric typewriter, and oscilloscope.

Custom-made systems

Air traffic control is just one example of the many special purpose electronic-computer systems created by Remington Rand. This high-speed system receives via teletype such flight facts as: departure time, destination, route, fuel load, payload, and other pertinent data. In less than half a second, the system electronically compares the facts on each flight with as many as 2,000 flight plans it has stored in its magnetic-drum memory. It then revises, cancels, or brings the information up to date according to current conditions. The system completes the process by teletyping the required re-

sults back to the sending station . . . without human handling.

System designing

Remington Rand specialists analyze your needs in scheduling, process control, machine control, inventory control, data reduction, automatic filing, or other problems. A system may be created for you from standardized "building block" components, or we can make components to meet your needs.

Computing services

Through two electronic-computing centers, Remington Rand offers you the advantages of the UNIVAC and the ERA systems on a service-bureau basis. The centers have solved problems of such diverse types as complex accounting and record keeping, involved statistical and personnel studies, and cross indexing of complex catalogs, books, and timetables.

One of the recent jobs handled by the UNIVAC center was a study of seasonal sales patterns and advertising timing. The Bureau of Advertising wanted a projection of 1954 monthly buying trends for 28 specific lines of merchandise in stores across the nation. To do the calculations on this series of 336 trend lines with desk calculators would have taken about 200 man-hours. The UNIVAC computer made all the calculations in just 3 and 1/2 minutes.

Let us show you how to save time and money on one-time jobs, deadline jobs, unusual jobs, and even routine jobs.

Management seminars

Through seminars and training courses, Remington Rand will help you learn how to apply electronic methods to your needs. In this way your organization can determine for itself the computer system needed—and the economic considerations involved—including choice between our rental or purchase plans. Remington Rand will also train your employees to operate the system efficiently. For more information, write to Remington Rand Inc., Electronic Computer Dept., Room 1214, 315 Fourth Ave., New York 10, New York.

IS THERE
STILL A WAY TO
BUILD AN ESTATE
FOR
YOUR CHILD?

YES

*with the greatest
Christmas Gift
of all*

Here is the Christmas gift that can never be forgotten. A special plan for youngsters has been developed by National Life of Vermont, the company "solid as the granite hills". This new plan can be applied for this Christmas for your child or grandchild, from birth to age 14*. It's a plan that not only offers protection in the present . . . but increases 5-fold in face amount at age 21. Yet it will cost you only 25¢ a day if issued before your child is six months old. Here's what the plan provides:

*ages 5-14 in New York.

During the growing years the child will have: \$2000 life insurance protection (from age 1 to 21**).

Or, an increasing cash fund that can help pay college expenses or finance an early start in business.

**from ages 0 to 1, the protection is \$500.

When 21 is reached: The \$2000 policy automatically increases 5-fold in face amount (\$10,000) yet the premium, payable only to age 65, remains the same!

No further evidence of insurability is required, regardless of health, occupation, war or aviation hazards! The very substantial cash value which this policy builds may be taken in cash for emergencies or used later in life to provide a life income at retirement!

Use coupon for full information.

NATIONAL LIFE
Insurance Company
MONTPELIER 1,
VERMONT

Please send full information on your
"Estate Builder" plan for children.

Name _____

Street _____

City and State _____

Age of Child _____

Color Scares TV Dealers

Sales drop in some cities brings worry about Christmas market . . . Reynolds Metals offers aluminum for the home handyman . . . Gasoline stations write finis to self-service.

Television dealers are color-shy. Sales had been coming along fine (BW-Oct. 10'53,p48). Now, following the fanfare of Federal Communications Commission's color hearings in New York, sales are off in some key markets. It was expected that color would dampen sales next year (BW-Jul.25'53,p132). But the dampening is showing already. And dealers are plagued with the burning question: What will happen at Christmas? According to Television Digest, they are imploring FCC to withhold its go-ahead until after the holidays, when over a third of the year's sales are usually made. In Salt Lake City, the local chamber of commerce last week called a meeting of TV distributors, retailers, and station executives to discuss the emergency.

Color isn't a bogey everywhere. That's apparent from reports of boom sales in cities where new stations are opening up. Other areas, such as New York City, for example, have a saturation battle on their hands. But color looks to be the main cause for the drop of the big 24-in. and 27-in. sets reported by some manufacturers.

• **Conversion**—Some set manufacturers have their own ideas on how to detour an over-all sales slump. Sightmaster Corp., New Rochelle, N. Y., claims to be the first company to convert a black and white set into a color receiver—at a cost of \$250. Emerson Radio & Phonograph Corp. had a proposal to offer a color guarantee that would let a buyer of a black and white set get full credit on it toward a color model if color reached the market by a certain date. Some manufacturers think this is bad psychology, that the less said about color's advent right now the better.

Some big dealers pooh-pooh the fuss. In New York City a group of them met last week, came to the conclusion, in the words of one, that "there really isn't anything to worry about—much." When people figure how expensive the first sets will be, how small the screens, and how few programs they can get, they'll settle for black and white, at least for a year or so, the hopefuls argue.

Do-it-yourself Aluminum

The fertility of the do-it-yourself field keeps enticing more manufacturers who are mainly industrial suppliers into the

consumer market. At Chicago's first Do-It-Yourself show last week, Reynolds Metals Co. entered the fray with do-it-yourself aluminum. This is Reynolds' third bid for consumers—it has already made aluminum foil and aluminum paint.

The company's do-it-yourself line includes some 36 items, including a continuous-roll-formed shape for window screen frames, sheets, rod, rectangular bar, tubing, plastic film, and several types of fasteners: rivets, washers, screws, and the like. The aluminum is an alloy especially developed so it can be cut with woodworking tools. Several big home toolmakers vouch that it won't injure their products.

Reynolds tried out its do-it-yourself kit on some 100 dealers in and around Louisville—mainly retail hardware and building supply outlets. Now it's about to start a campaign to put it over nationally. For dealers, it has a self-service display rack and books of step-by-step instructions for the sometimes not-so-handy weekend handyman.

Service, Please

George R. Urich, the man who started the self-service gasoline craze in Southern California (BW-Jul.9'49, p34) is liquidating his operation. His lease to Standard Oil Co. of California of 25 of his 31 multipump outlets practically rings down the curtain on a marketing vogue that has been tapering off since 1949.

The ease of the superstation is akin to that of the dinosaur. It grew too big for its own good.

• **Museum Piece**—Urich started self-service in 1947. A host of other station operators got on board. They sold gas for 5¢ less per gallon than the service stations did—and while the sun shone, plenty of hay was made. In the scheme's heyday, an operator netted from \$2,500 to \$5,000 a month from his big multipump layout—usually 15 pumps to a station, sometimes even more.

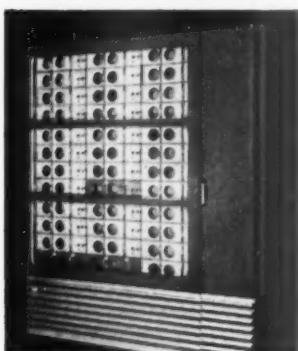
The trouble was that the major companies discovered that if they could cut that 5¢ differential to 2¢, they could lure their customers back. When it comes to filling her up, customers like service (BW-Mar.21'53,p62).

The result was that a self-service operator had a big investment in equipment that wasn't getting used. Little

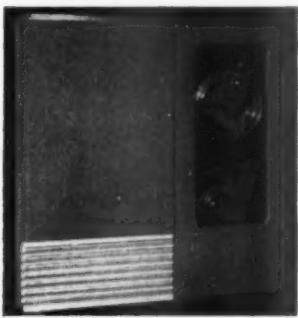
This is the latest in electronic "brains"

It's IBM's electronic calculator. It performs such mathematical feats as solving, in a few minutes, equations useful in aircraft wing design, which require some eight-million calculating steps. Such equations would take an expert working with a desk calculator seven years to solve.

The heart of this "brain"—comprising banks of cathode ray tubes through which all information to and from all other components must pass—is protected from stray electrostatic charges by PYREX brand EC electrically conducting glass. The magnetic drum unit "memory device" is protected in the same manner.



The 72 cathode ray tubes in the Storage Unit (pictured above) store 20,480 digits in the form of electronic charges, ready for delivery to other parts of the machine in 12/1,000,000 of a second.



The two drums in the Magnetic Drum Storage Unit (pictured above) store as many as 81,920 digits as magnetized spots on the drum faces. Each digit can be recalled for processing in an average of 40/1,000 of a second.

The PYREX brand EC glass window panels in these extremely sensitive "memory" devices permit the operators to see that everything inside is working properly and they ward off outside electrostatic charges which would disrupt operation.



How EC glass solved a problem for this electronic "brain"

Protection of IBM's electronic calculator from straying electrostatic charges became a design problem because operators had to see that everything was working properly *inside* certain units.

Metal would protect; but you can't see through it. Ordinary glass lets you see, but it doesn't protect.

The IBM engineers solved the puzzle by using Corning's EC glass for cabinet window panels.

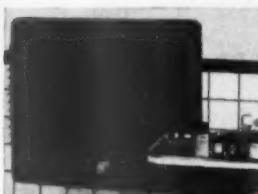
EC glass is a PYREX brand glass with a thin transparent electrically conducting coating permanently bonded to one surface. It carries electrostatic charges away just as metal does.

This remarkable material has many other uses—For example, EC glass is excellent for home heating units. Simply switching an electric current through the

EC coating makes it a heating element that gives out an evenly distributed flood of radiant energy. It's finding increasing use in industrial heating and drying operations, too, especially where an even distribution of heat is desirable.

The EC coating is also an efficient reflector of infrared heat rays. So you find EC glass panels used as shields for people working near sources of intense heat, in steel mills, for instance, and movie or TV studios.

The immense possibilities of PYREX brand EC glass have scarcely been scratched. If it interests you, Corning engineers will be glad to talk with you about it and any application you may have in mind. There's a more complete story in the June-July, 1953, issue of the "Corning GLASSMAKER." We'll be glad to send you a copy.



Wall-mounted Berko EC heater in doctor's office.



EC radiant panels drying lacquer on plastic sheets.



EC panels protect shear pulpit operator in steel mill hot spot.



CORNING GLASS WORKS
CORNING, NEW YORK

Corning means research in Glass

CORNING GLASS WORKS, 631 Crystal St., Corning, N. Y.

Please send me a copy of "Corning GLASSMAKER," June-July, 1953 issue.

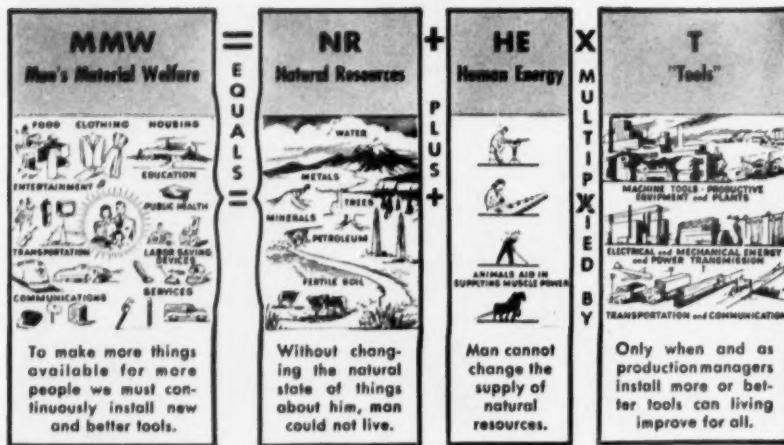
Name.....

Title.....

Company.....

Address.....

City..... Zone..... State.....



"To Have or Not to Have?" Is a Question of "Tools"

The above paraphrase from Shakespeare is the real key to the high standard of living in the United States.

It is no accident that this country has 72% of all the automobiles in the world, 61% of the telephones, 92% of the bathtubs and a comparable superiority in most other things making up man's material welfare.

The reason for this fantastic superiority in "having" things is our greater use of "tools" for multiplying man's energy. The equation above graphically portrays this.

We have increased output per hour of work about 7½ times since 1850 only by constantly putting newer and better "tools" to work in industry. This fundamental truth is too often obscured in complex discussions of money, banking, distribution, wages and other phases of economics. Once the bedrock basis of our system is thoroughly grasped, all else falls into its proper place and proportion. "Tools" are the key. What serves to provide more and better "tools" is good. What serves to limit, or destroy, greater use of "tools" is bad.

The contour-cutting band machine is one on the ingenious tools used to increase man's ability to produce more goods for himself. It was originated by The DoALL Company.

This machine tool bandsaws a narrow slot in metals, wood, and, in fact, in any solid substance. There are 18 different kinds of band tools for use with these machines to do a thousand different kinds of operations.

If a material is too brittle or hard to saw—like glass or granite—then the band tool employed is impregnated with

**Source: Industrial Relations Center,
University of Chicago.**

diamonds, or has tiny blocks of grinding wheel material mounted on it. If the material is to be polished, there are abrasive bands which can polish any material, including tungsten carbide. Thus, this same machine can sharpen carbide lathe tools. If the material is to be filed, a band of files is employed (some thirty different styles and shapes of file bands are available). If the material is pliable—like sponge rubber or paper—the band tool employed has a knife edge which slices through the substance.

Complete information is available from The DoALL Company, or any of its 38 Sales-Service Stores.



SHAPE CUTTING, a job done best, fastest and cheapest on a DoALL Band Machine.

DoALL

FREE ON REQUEST for your bulletin boards: "Why Living Improves in America", a 17" x 22" wall chart, without advertising matter.

THE DoALL COMPANY
254 N. Laurel Ave., Des Plaines, Ill.

by little, he had to shift back to service operations again.

But the serve-yourself station has left its mark. Many dealer-operated stations took a tip from Urich's idea and expanded into three or four lines of pumps—new, clean, and shiny, like the supermarket.

MARKETING BRIEFS

Advertisers' Annual, compiled by Printers' Ink, contains detailed data on practically every aspect of advertising. Besides such basic material as advertising volume back to 1867, breakdowns of revenue by media, and the like, it contains sections on laws affecting advertising, marketing statistics (cigarette brand trends, for example). Price to nonsubscribers: \$2.50.

The trend to nonfiction that has hit some general magazines (BW-Jul.12 '52,p38) is reaffirmed by market researcher Lloyd H. Hall. In 26 leading consumer magazines, Hall noted that nonfiction articles had risen from 73% of lineage in 1938 to 84% last year. Articles on how to feed families climbed 174%; health studies 111%; information on home furnishing and management was up 100%.

Dow Chemical Co. made its first break on a national scale into the consumer market. First product to get the full treatment under the Dow label will be "Saran-Wrap," a transparent film, to be sold through grocery outlets.

General Shoe Corp., big Nashville shoemaker and retailer, got the all-clear from stockholders to authorize a new stock issue for the acquisition of Berland Shoe Stores, St. Louis retailer. This deal will strengthen the company's outlets for medium and low-priced women's shoes and children's footwear.

Painting contractors haven't liked to admit that their market has been hurt by the amateur with a paint roller in his hand. But now they are starting to fight back. The Painting & Decorating Contractors of America, the industry trade association, is urging new marketing methods on its members. One suggestion: Push time-payment house painting jobs.

Stock bonus for dealers is the latest method for boosting appliance sales. Gerald O. Kaye & Associates, Avco's New York distributor, is giving Avco stock with dealers' purchases of Bendix and Crosley major appliances. The ratio: 25 shares for 60 units.



Trial by Fire... ALCOA Aluminas can take it!

Walking through searing flames—such was the test of innocence or guilt in the cruel "trial by fire." Practiced in Western Europe during the early Middle Ages, the trials were decided by a judge, based upon the theory that only the innocent would survive without severe injuries.

When it comes to surviving industry's "trial by fire," there's nothing quite like ALCOA Aluminas—they can take it! In process after process—where the fire is the hottest—you'll find refractories made with ALCOA Aluminas are the strongest . . . withstand the heat and last the longest!

These commercially pure, highly inert aluminum oxides offer unmatched characteristics to makers of high-temperature ceramics. Super-duty refractories for furnaces and glass tanks, spark-plug porcelains, special cements, heat-exchanger pebbles, laboratory ware, catalyst-bed supports, and other products still in the experi-

mental stage—all perform better, longer, when they contain ALCOA Aluminas. And performance improves as the alumina content increases!

Let us tell you about the exceptional high-temperature performance record of ALCOA Aluminas. Their outstanding thermal, physical, chemical and electrical properties may have profitable applications in your business.

Write to ALUMINUM COMPANY OF AMERICA, CHEMICALS DIVISION, 700-K Alcoa Building, Pittsburgh 19, Pa.

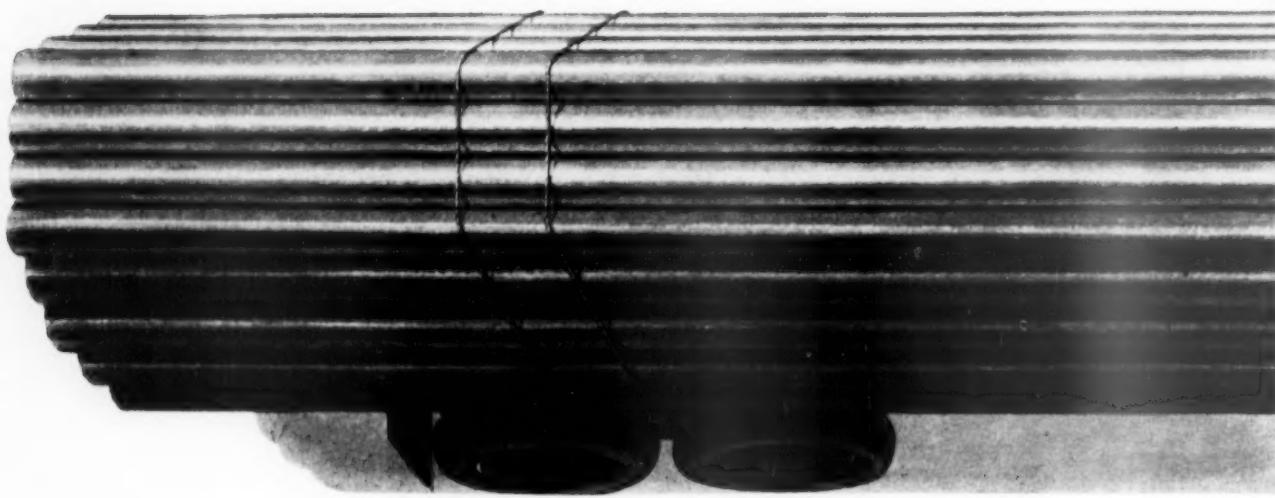
Alcoa
Chemicals

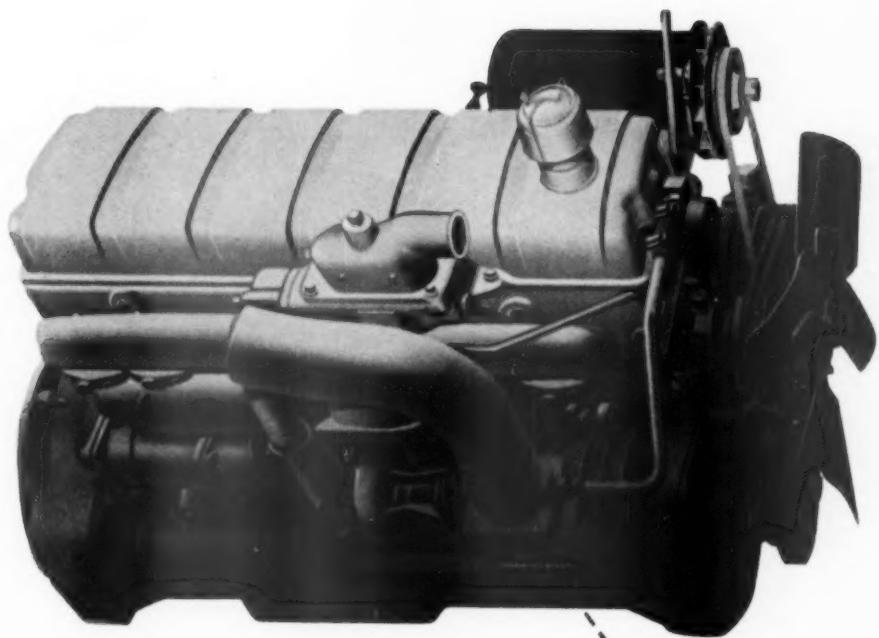


ALUMINUM COMPANY OF AMERICA

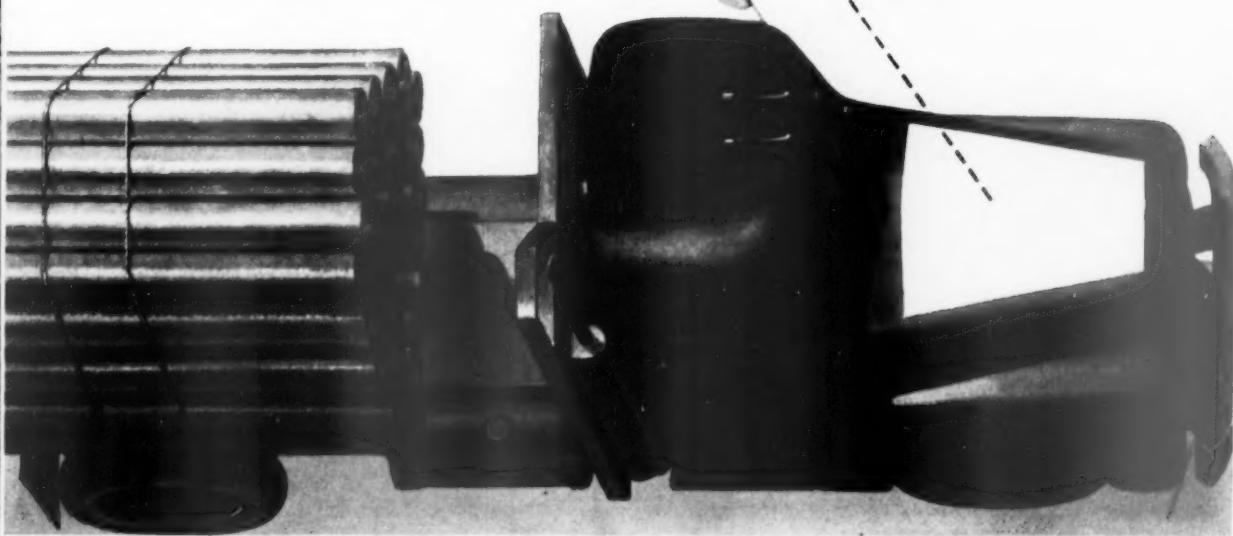
**Proven by 100,000,000
miles in medium
heavy-duty trucks...**

This 150 h.p. diesel will give you Cummins





outstanding performance and economy



Under all kinds of operating conditions, the new Model JBS-600 has proved it can meet the needs of medium heavy-duty truck operators. It has the same features which have long made Cummins engines the standard of diesel quality—features formerly available only in heavy-duty trucks:

- 4-cycle design for ruggedness and long life.
- Exclusive Cummins fuel system for simplicity and economy.

- Operation on inexpensive No. 2 diesel fuel for minimum fuel costs.

Cummins JBS diesel power is offered by the following leading truck manufacturers: Autocar, Corbitt, Diamond T, Federal, Hendrickson, International Harvester, Kenworth, Reo and White.

See your Cummins dealer or representative of one of the manufacturers listed above.

Cummins®

Engine Company, Inc. • Columbus, Indiana

Leaders in rugged, lightweight, high-speed diesel power [60-600 h.p.]



Be your own Fortune Teller... in one easy lesson

It doesn't take much experting to forecast the competitive edge that Allegheny Metal can give you.

If you're one who'd use stainless steel in plant or processing equipment, its ease of cleaning, low maintenance and long life can cut production costs and raise your quality standards. If you use it in a product, the matchless strength and perennial beauty of stainless steel

can give you a bale of extra value to sell.

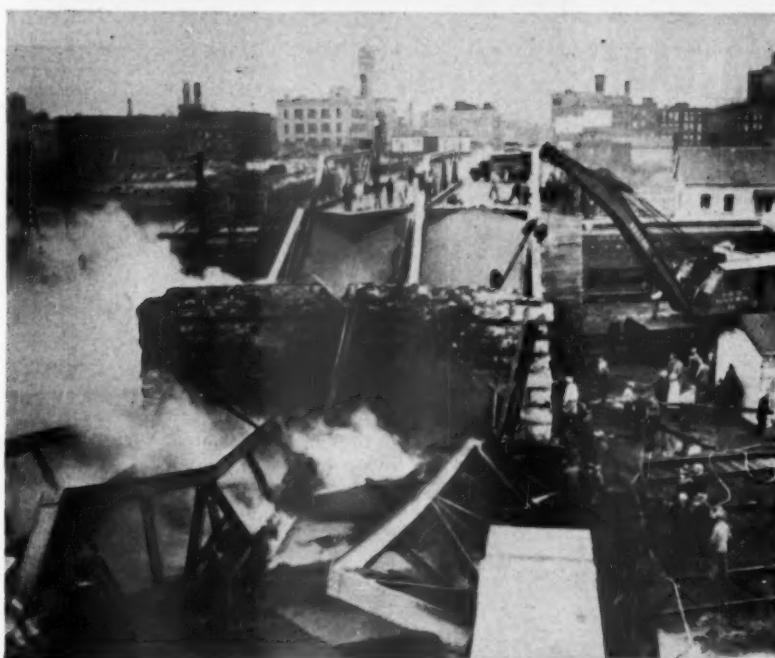
Either way, you'll have something going for you when the chips are down . . . when materials are plentiful but orders are tough. • Now's the time to start Allegheny Metal working for you, and we're ready to help every possible way. *Allegheny Ludlum Steel Corporation, Oliver Building, Pittsburgh 22, Pa.*

You can make it BETTER with
Allegheny Metal

Warehouse stocks carried by all Ryerson plants



BOSTON BRIDGE DISASTER



Portrait of a Traffic Jam

BOSTON—This city has had a full-fledged traffic problem since its Dover St. bridge burned and collapsed last week (picture). Little relief is in sight at least until Dec. 5.

The bridge was one of the main links between downtown Boston and South Boston, the South Shore, and Cape Cod. It spanned the New Haven RR tracks and the almost dried-up Fort Point Channel, near South Boston. The Broadway and Dorchester Ave. bridges both cross within a short distance, and under normal conditions they would have been able to handle the load. The trouble is that the Broadway bridge itself has been closed for several months for repairs that won't be completed until Dec. 5. Fortunately, enough has been finished so that the city has been able to open it to one-way traffic morning and evening since the fire. But it can carry at most only 3,500 cars a day on that schedule—and the Dover St. span had been carrying an estimated 15,000.

Meanwhile, the detouring cars are adding to already heavy congestion over a wide area. With 25 additional traffic officers assigned, the situation is described as "barely under control." The pressure will increase as Christmas draws near.

When the Dover St. bridge will be rebuilt—or if it will—is uncertain. The much-disputed route of the proposed

Central Artery, an overhead expressway, lies somewhere in this area, and the suggestion has been made that it be located so as to serve the purposes of the old bridge. This proposal is likely only to delay any final decision, because, like every other proposed routing of the Central Artery through the area so far, this one is certain to be violently opposed.

Performance Zoning

CHICAGO—A whole new concept of industrial zoning is about to be introduced in Chicago.

Instead of specifying types of industries that are permitted or prohibited in specific zones, a proposed zoning code for the city would set up for each zone maximum permissible limits of air pollution, noise, fire hazards, traffic, and so on. Any company, regardless of its industry, that could meet a zone's standards would be allowed to locate in that zone.

Failure to Keep Track

LAS VEGAS, NEV.—Either this gambling capital has finally reached its saturation point or its patrons are allergic to fresh air and daytime hours. Last week its newest gambling enterprise, a race track opened just last month by the Las Vegas Jockey Club,



there's a new sound in **LOUISIANA**

The new meaningful sounds like that of a powerful roaring rocket engine, as modern as supersonic flight . . . because today's Louisiana is geared to meet the demands of jet-powered industry.

There's the sound, for instance, of 16 refineries processing close to 1,000,000 barrels of petroleum daily providing an active nation with over 700 different products necessary to its daily life.

There's the sound of eight paper mills operating full blast to provide thousands of plants with a vital and strategic raw material.

There's the sound of new plant construction at the rate of one new plant or expansion to existing ones every 2 working days.

Aviation men have an expression, "CAVU," meaning "ceiling and visibility unlimited." We'd like to borrow that expression, because on Louisiana's industrial scene ceiling and visibility are unlimited . . . in opportunity for men of industrial vision.

Your plant will grow and prosper in Louisiana.

For all the facts about Louisiana direct your inquiry to:

ELMER D. CONNER, Exec. Director

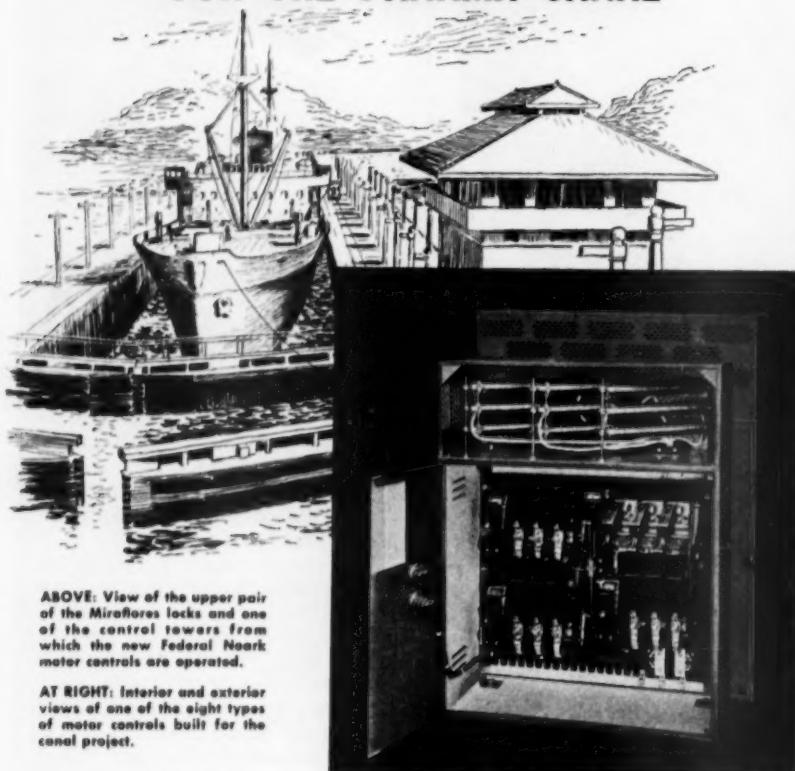
DEPT. OF COMMERCE AND INDUSTRY

P. O. BOX 4185, Capitol Station
BATON ROUGE 4, LOUISIANA

We will appreciate it if you write on your company letterhead.

IT'S FEDERAL NOARK® MOTOR CONTROLS

FOR THE PANAMA CANAL



ABOVE: View of the upper pair of the Miraflores locks and one of the control towers from which the new Federal Noark motor controls are operated.

AT RIGHT: Interior and exterior views of one of the eight types of motor controls built for the canal project.

THE PANAMA CANAL is now undergoing an extensive modernization program. One phase requires new electric motor controls for the locks...and Federal Noark devices are being installed. These controls will assure the safe, efficient motor starting required for rapid and continuous canal service.

Unique requirements

Special processes in the manufacture of these 398 motor controls were necessitated by the specifications. Wire insulation, for instance, and other parts likely to deteriorate under tropical conditions had to be protected against "attack by insects, especially cockroaches and termites," and made fungus-proof with suitable shellac. To accomplish this, Federal engineers treated each part separately before assembly.

Fastest-growing in its field

Federal Noark developments in recent years have brought new efficiency and economy throughout the whole range of electrical control equipment. The huge demand for Federal products has been met by a continual increase in manufacturing facilities, and today there are 11 strategically-located Federal plants serving the electrical industry the country over.

FEDERAL ELECTRIC PRODUCTS COMPANY
Main Office: 50 Paris Street, Newark 5, N. J.

FEDERAL NOARK®

Plants at Newark, N. J.; Long Island City, N. Y.; Hartford, Conn.; Cleveland, Ohio; Gary, Ind.; St. Louis, Mo.; Dallas County, Texas; Los Angeles, Calif.; San Francisco, Calif.; Santa Clara, Calif. Affiliated plant, Toronto, Canada.



closed down for "at least the rest of the season."

The reason: lack of patronage. The city itself doesn't have the population to support a race track, and the promoters had counted on the thousands of out-of-towners who flock to the casinos. It turned out that they preferred to stick to the crap tables and to their old habits of gambling all night and sleeping all day. Even after the track slashed purses and personnel, and cut back to weekends only, it couldn't break even.

Home-grown Airport

CINCINNATI—In 1947, a new Greater Cincinnati Airport was opened, across the Ohio River in Boone County, Ky. It was built there at the insistence of the Civil Aeronautics Administration (which supplied most of the money) over Cincinnati's objections. Cincinnati wanted it in Ohio. And in 1948, the city started buying property for a new airport at Blue Ash, some 11 mi. northwest of Fountain Square, and within 5 mi. of Oakley and Evendale, the city's rapidly growing heavy industry areas. At the same time, the city sent out "letters of intent" to buy the entire Blue Ash site.

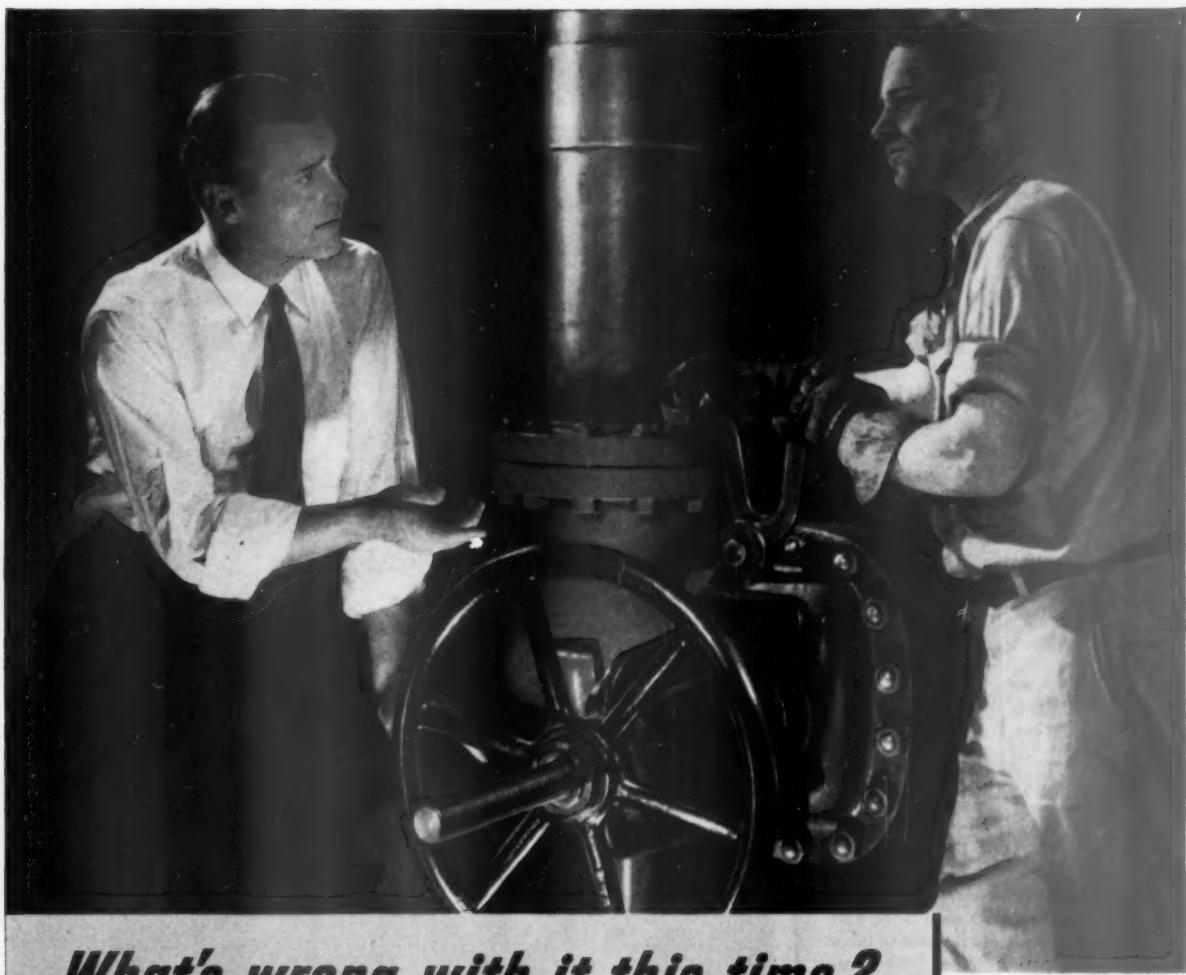
Up to now, however, it has acquired about 25% of the 1,500-acre site. In the meantime, despite the letters of intent, a few new buildings have gone up on the site itself, and many more along its fringes. Property values have been zooming. So the city figures it had better get the rest of the site at once if there is ever to be a Blue Ash Airport. Stumbling block: how to raise the needed \$2-million.

Newest plan is to issue 10-year, 4% revenue bonds—and sell them to the City Retirement System. Retirement officials are "considering" the plan now; they're scheduled to meet next week. If they agree—which now seems likely—the City Council will have to adopt a special ordinance permitting them to buy the bonds. Currently, they're limited by law to insurance-grade investments.

Trial Fare Cut

NASHVILLE—A new operator, Nashville Transit Co., has just taken over this city's bus system. And it started off on the right foot, in the opinion of most local residents, when it announced this week that it would reduce fares for a trial four-month period. After that, it will reappraise the new fare structure to see if it can make it permanent.

The old rate was three tokens for 35¢; the new rate is nine tokens for \$1. So the fare cut comes to precisely five-ninths of a cent per ride.



What's wrong with it this time?

"It" is a valve that was supposed to cut costs. That it did, but first cost only. Beyond, it gave no assurance of quality or dependability. Result: The price tag saving was wiped out many times over by repeated maintenance at today's high labor rates.

That's an important matter with thrifty buyers of piping equipment. They want greater assurance of quality—not fictitious savings. They know it's the only way for a plant to stay within maintenance and operating budgets.

That's why thrifty buyers are insisting on the traditionally better quality of Crane valves and fittings—quality that means longer life and greater freedom from repairs. What's more, Crane puts such quality into piping equipment for every industry's needs.

Crane Co., General Offices: 836 S. Michigan Ave., Chicago 5, Ill.
Branches and Wholesalers Serving All Industrial Areas.



CRANE

VALVES • FITTINGS • PIPE • PLUMBING • HEATING



These ashes could be your records

After a fire you can replace the building but not the records. Many a good business has closed its doors forever, simply because its precious paper records burned to ashes. And yet insulated steel files offering almost complete protection are available today at a cost about twice that of uninsulated steel files. For example, Meilink has recently introduced a new

HERCULES INSULATED STEEL FILE

with highest Underwriters' Laboratories rating for insulated record containers

It has been tested for one hour in 1700° Fahrenheit with the contents emerging undamaged. It has also survived the drop test (equivalent to falling through a collapsed floor 30 feet onto brick and concrete). Would it not be wise to have one of these files to guard your irreplaceable papers, wherever you keep them, in office, plant, warehouse, etc? Legal and letter sizes, with two, three or four drawers, including choice of drawer-by-drawer locking mechanisms.



For folder and dealer's name write:
MEILINK STEEL SAFE COMPANY
1672 Oakwood Ave., Toledo 6, Ohio

THE MARTS



MADING'S ESPERSON DRUGSTORE in Houston has developed, over the years, into an important gathering place for men in all phases of the oil business. The . . .



TRACTS OF LAND form the principal topic of conversation at the drugstore; its main customers are men who specialize in buying and handling oil-land leases.



The Drugstore

The oil industry is big and dramatic. You envision a vast field spotted with derricks, a giant refinery, a pipeline stretching across half a continent. You see a lonely surveying crew trudging across a prairie, a squad of roughnecks sweating with lengths of steel pipe. What you don't see, perhaps, is that part of the industry represented in the pictures above.

You don't see it because, on the surface, it seems less dramatic than ex-



INFORMAL ATMOSPHERE is misleading to outsiders. In here, over coffee, millions of dollars can be made or lost through a simple nod or a handshake.



BIG DEALS are figured out on scraps of notebook paper, napkins, anything that's handy. Only after commitments are made is an agreement drawn up formally.

Where Oil Men Gather

ploring or drilling. But from a certain point of view, it's the most exciting phase of all. It's a phase where millions of dollars can be made or lost through a simple nod or handshake. It's the business of buying and trading oil-land leases.

- **Coffee Club**—Oil men like to think of themselves as a close-knit fraternity, a semiprivate club in which a man's word is as good as his bond. At least in the land-leasing end of the business,

many deals are made without the scratch of a pen: Only after the commitments are made do lawyers, accountants, and paper enter the picture.

As an oil man's deals are informal, so are the places where he does much of his business. No matter what oil center you're in—Houston, Los Angeles, some town in the Williston Basin—you'll always find there's a place where oil men congregate informally. It may be a restaurant, a hotel lobby, a barber

this is the new

KLEINSCHMIDT TELEPRINTER

*...the first
important business
communications
advance
in 30 years!*



- Intra-plant or inter-plant; national or international—wherever fast, accurate communications are required between departments or branches, Kleinschmidt Printed Communications Systems can speed your service, cut your cost. Sender and receiver have printed originals of every message... transmitted at 100 words a minute.



Kleinschmidt produces page printers, reperforators, and switching systems. Illustrated at left: Model 120 Reperforator

KLEINSCHMIDT

*the foremost name in
printed communication*

KLEINSCHMIDT, INC.

Deerfield, Illinois

Send your new 24-page brochure,
"Communications For Commerce And Industry."

Name _____

Company _____

Address _____

City _____ State _____



**How many trucks
must you own
to guarantee
prompt deliveries?**

**There's one sure answer:
NONE!**

With nationwide Reo Truck Leasing, you get guaranteed, uninterrupted transportation—and extra trucks for peak needs—yet you don't tie up a dollar of your capital.

You get the best-looking trucks on the street . . . clean; beautifully maintained; Market serviced and insured; painted in your style and colors with your name only; and equipped with puncture-sealing tires . . . all at a low weekly or monthly billing that is fully tax-deductible.

Reo Truck Leasing brings you the economies of fleet-scale upkeep, basic low costs at the manufacturer's level, and complete relief from all truck-management problems. You supply only the drivers. It's new, different, better. Write today!

REO TRUCK LEASING, INC.
(A Subsidiary of Reo Motors, Inc.)
DEPT. 101, LANSING 20, MICHIGAN



A progressive, foresighted truck manufacturer has revolutionized the truck-leasing business. Write for this new 16-page booklet.

Now operating in the
following cities:

ALBANY	INDIANAPOLIS
ATLANTA	KANSAS CITY
BIRMINGHAM	LANSING
BOSTON	MILWAUKEE
CHICAGO	MONTREAL
CINCINNATI	NEW YORK
CLEVELAND	OAKLAND
DALLAS	PHILADELPHIA
DENVER	PITTSBURGH
DETROIT	ST. LOUIS
LOS ANGELES (Universal Motor Mileage, Inc.)	ST. PAUL
	SAN FRANCISCO
	TORONTO

—and soon in other trade areas.



LOBBY of Esperson building holds overflow from drugstore, which is often jammed.

shop. Or it may be a drugstore like the one in the pictures—Mading's Esperson Drugstore in downtown Houston, Tex.

The Esperson Drugstore is, quite literally, an important oil mart. From 10 a.m. to 4 p.m. each day it's jammed with oil men talking business. Some of them wear cowboy hats and boots; others wear business suits. Some carry rolled-up maps of various tracts of land—maps showing in detail who owns the land, who holds the leases on it, what wells have been drilled in the area, when the wells were drilled and to what depth, whether any production was established. Other visitors to the drugstore don't need maps; they know every field in the Gulf Coast area by heart. The air buzzes with such esoteric terms as "bottom-hole money," "working interest," "override."

• Activities—Oil men from all over the country, interested in land all over the country, drift into the Esperson Drugstore to do business or listen to the talk. The drugstore is primarily a meeting place for lease men (essentially, land brokers); but among those present every day you'll find scores of drilling contractors, independent operators, geologists, oil service and tool company salesmen, investment house representatives, oil magazine editors.

The length of time one of these men might spend in the drugstore each day depends on his particular sphere of interest. Tool and service salesmen spend so much time there that many of them don't even maintain offices. Other oil men just stop in a few hours a week to see friends, listen for hot information about new drilling activities or promising areas. Still others, in between the two extremes, maintain standing dates with business acquaintances to meet for coffee at certain hours.

The drugstore draws independent oil

California Plants for Sale or Lease

Our INDUSTRIAL SURVEY gives up-to-the-minute facts on plants and plant sites available in Metropolitan Oakland Area, which includes all of Alameda Co., Calif. Also data on warehouse facilities. Sites in urban, suburban and rural areas. Plants to meet your individual requirements built for you on sites you select. Use this free, confidential service to get—all in one place—data otherwise available only from 12 separate sources. In writing, outline your requirements in detail. Also ask for Data Sheets on Climate, Markets, Distribution and Living Conditions. Or for Fact Book on the EXTRA PROFIT OPPORTUNITIES 228 national firms enjoy by operating branch plants in this area. Address: Alameda County New Industries Committee (a non-profit organization representing the entire county), Suite 101, 427-13th Street, Oakland, California.

for Greater Strength with Lighter Weight

in modern
material handling equipment

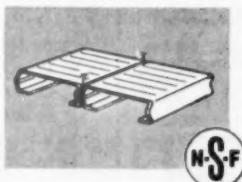


THE EVANS DF LOADER is a product of Evans Products Co., Plymouth, Mich. DF means Damage-Free, Dunnage-Free.

NAILABLE STEEL FLOORING for boxcars, flatcars and gondolas is made of N-A-X HIGH-TENSILE steel, and is a product of Steel Floor Division, Great Lakes Steel Corporation.



Engineering data on these products available upon request to the manufacturers.



The increasing use of the Evans DF Loader reflects the progress of railroads toward more efficient material handling methods.

In the DF Loader there is high strength with minimum weight through the use of N-A-X HIGH-TENSILE steel. This low-alloy steel has 50% greater strength than mild carbon steel, with greater resistance to corrosion with either painted or unpainted surfaces.

You can get the same results as Evans. Your product can be made stronger, lighter in weight and longer-lasting, when you specify N-A-X HIGH-TENSILE steel.

The "Wonder Bar," a section of which is shown at left, is a vital part of the Evans DF Loader. It is a wooden bar reinforced by a Z-bar made of N-A-X HIGH-TENSILE.

The "Wonder Bar," when locked into place, secures all kinds of lading. It is strong enough to resist shifting load stresses in moving boxcars, yet so light that one man can lift it into position. The DF Loader provides real operating economies for both railroads and shippers.

Another modern product for efficient transportation equipment is Nailable Steel Flooring, also made of N-A-X HIGH-TENSILE steel.

GREAT LAKES STEEL CORPORATION

N-A-X Alloy Division

Ecorse, Detroit 29, Mich.

NATIONAL STEEL CORPORATION





Wrap Out Rust

**with NOX-RUST
Vapor-Wrapper**

New Chemically Active Paper

Gives Fast, Clean Rust-Proofing—at far lower cost!

VAPOWRAPPER—easy to use as wrapping paper—rust-proofs machine parts and delicate instruments at lowest cost . . . delivers them to your customers "factory-fresh."

Like many other major manufacturers, Lufkin Rule Co. uses Vapor-Wrapper to protect its delicate precision instruments from damaging rust.

Vapor-Wrapper protects all metal products—from cotter pins to printing presses. It economically blocks rust formation on products being shipped or stored.

**NOX-RUST
(VAPOR)
WRAPPER**

NOX-RUST
Chemical Corporation

333 North Michigan Ave.

Chicago 1, Illinois

Offices in Principal Cities

- Volatile Corrosion Inhibitors

- Automobile Undercoating • Metal Cleaners
- Rust Preventives • Sound Deodorizers

The chemical within Vapor-Wrapper—an exclusive development of NOX-RUST laboratories—makes moisture-laden air non-corrosive . . . without the need for an air-tight package . . . without deposits forming on the metal. You can cut costs and improve service with Vapor-Wrapper!

Vapor-Wrapper conforms to Military Specifications MIL-P-3420, Packaging Materials, Volatile Corrosion Inhibitor Treated.

Clip to your letterhead and write for facts today!



NOX-RUST Chemical Corporation
Dept. 101, 333 N. Michigan Ave.
Chicago 1, Illinois

Please send me your booklet on Vapor-Wrapper, the rust-preventive paper that wraps out rust.

Name _____	Title _____
Firm Name _____	
Address _____	
City _____	Zone _____ State _____

men more than representatives of major companies. However, big-company scouts drop in often to look and listen. • **Focal Point**—How did this drugstore come to be a gathering place for oil men? Primarily, because of its location: It's housed in the adjoining Neils Esperson and Mellie Esperson buildings, which probably hold more independent oil offices than any other office building in the country.

The word "Mading's" in the drugstore's title comes from the Houston drugstore chain that operates it. The name "Esperson" comes from Neils Esperson and his wife, Mellie, legendary figures in Texas oil history who put up the buildings in which the drugstore is housed. The Neils building, finished in 1927, has 27 floors; the Mellie building (1941) has 19. Together, they hold 400,000 sq. ft. of office space above their ground floors. As each building was finished, the Espersons induced many of their friends in the oil business to move in. That started a trend, and today the office roster lists over 500 oil men of all kinds and sizes.

It was only natural that the Mading's drugstore (which straddles both buildings on the ground floor) should become a meeting place and coffee club for the men with offices in the Esperson buildings. It was also natural that, sooner or later, oil men from other buildings nearby—buildings with no drugstores or restaurants—should gravitate to the Esperson club. Eventually, the drugstore ceased to be merely a drugstore and became an oil business center.

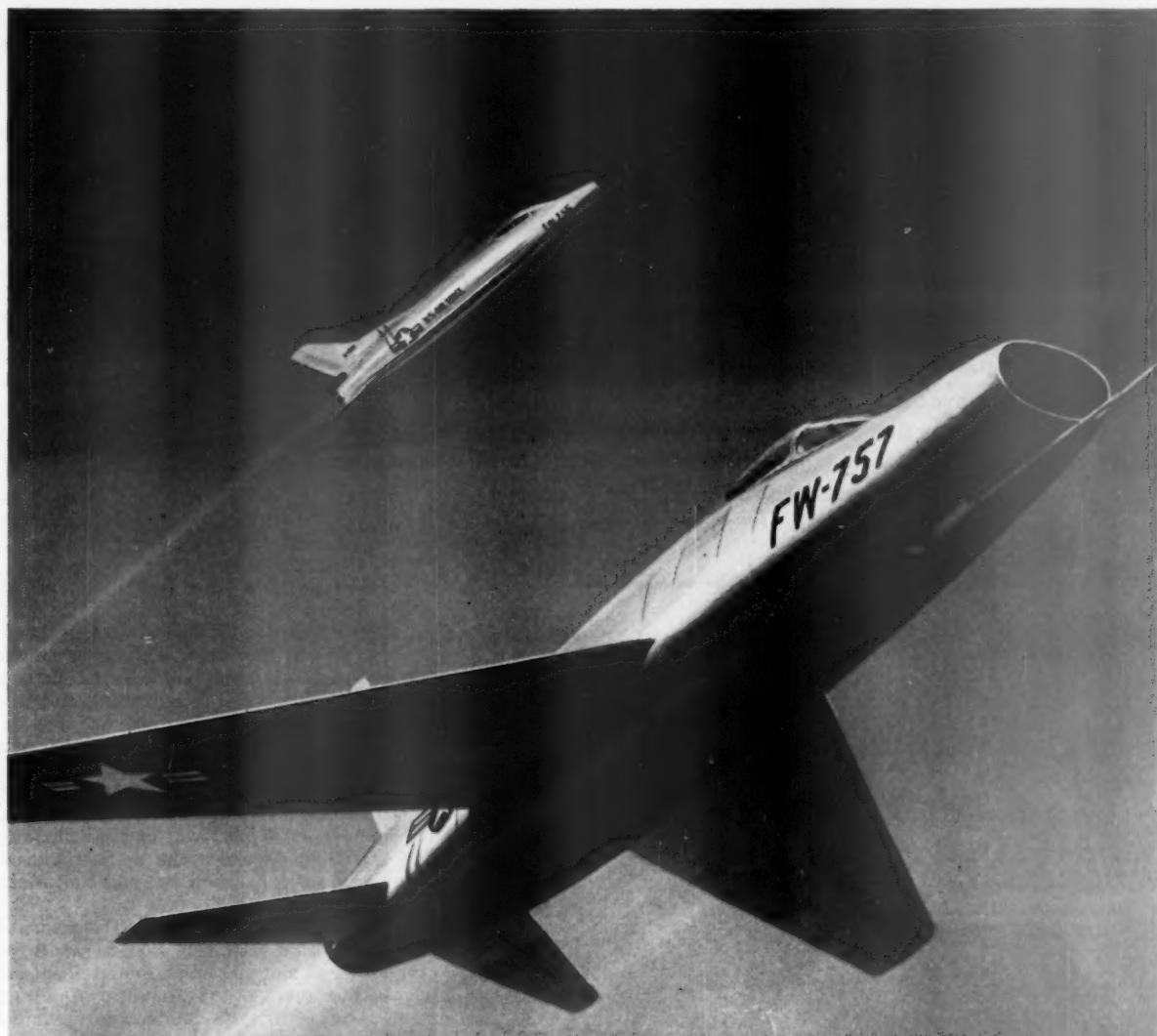
There are other places in Houston where oil men gather to talk business. There's the Petroleum Club, for instance, or the Houston Club. But these are private clubs, a little on the formal side. The Esperson Drugstore, on the other hand, is strictly informal.

• **Down to Business**—Exactly what kind of deals are made over the coffee at the Esperson? The big ones are deals involving land. To understand them, you have to know something about the oil-leasing business.

The key man is the lease man, or lease broker, or "lease hound." His principal job is to acquire leases for mineral rights on land that has, or is thought to have, oil-producing potential. For this job he needs three things: (1) a firm knowledge of real estate matters, (2) a winning way with tough-minded landowners, and (3) a touch of promotional ability. He'll also find a knowledge of geology helpful. If he has at least the first three requirements, and if his luck is good, he may well end up a millionaire.

He may work for himself, buying up leases and either reselling them or handling them in some other way to turn a profit. Or he may acquire leases,

NORTH AMERICAN HAS BUILT MORE AIRPLANES THAN ANY OTHER COMPANY IN THE WORLD



FASTER THAN SOUND

F-100 SUPER SABRE

AMERICA'S FIRST TRI-SONIC AIR SUPERIORITY FIGHTER...FIRST TO FLY
FASTER THAN THE SPEED OF SOUND IN LEVEL FLIGHT...TOP WEAPON
EFFECTIVENESS...NOW IN PRODUCTION FOR THE U. S. AIR FORCE

NORTH AMERICAN AVIATION, INC.

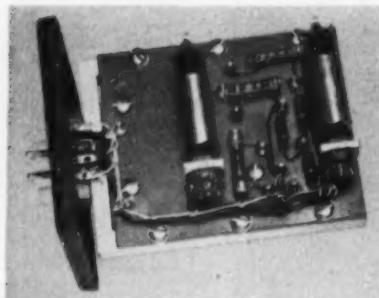
BUILDERS OF THE KOREA FAMED F-86 SABRE JET

**Today's
Product Improvement
is tomorrow's
Profit Insurance**

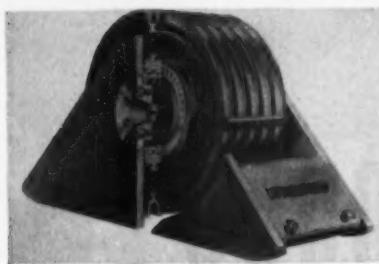
► The decisions you reach on product development today can have a most important bearing on tomorrow's company profits. It is essential to make *sure* that these decisions are based on sound, unbiased and analytical judgment.

By applying highly specialized skills in gathering and analyzing all pertinent information, DFI can help you arrive at such a "sound, unbiased decision".

Shown here are typical examples of DFI-developed products resulting from this objective approach.



MICROWAVE COMPONENT in "breadboard" stage of development. One of many DFI communication components and equipment projects—both military and commercial.



CROWN BLOCK for an oil drilling rig. One product in a long-term DFI multi-product development program for a prominent manufacturer of oil field machinery.



GARBAGE DISPOSER—the end result of a DFI project. This development put our client in the garbage disposer field on a highly competitive basis.



Write Us For Booklet describing the DFI Creative Product Development services, and showing how we serve an important cross section of American industry.

designers for industry, inc.

Established 1935

2915 DETROIT AVE., CLEVELAND 13, OHIO

PLANNED

PRODUCTS

". . . the landowner, naturally, wants the best deal he can get . . ."

DRUGSTORE starts on p. 64

on a sort of free-lance basis, for a big company—in which case his compensation comes from whatever commission arrangement he can make.

• **The Landowner**—In either case, the lease man's life is not easy. One of his first jobs is to dicker with the landowner—a farmer or rancher, perhaps, who owns land thought to contain oil. The landowner, naturally, wants the best deal he can get. And in oil-producing areas, like Texas and Louisiana, landowners generally have a pretty good idea of what the going rates for oil leases are. It's like a car salesman trying to sell a car to another car salesman. The customer knows all the tricks.

Usually, a lease broker will offer a landowner three things in exchange for a lease: First, he'll offer a bonus payment per acre. This is usually a lump sum, paid immediately on consummation of the agreement, and may vary from \$1 to \$2,000 an acre—depending on how promising the tract of land is for oil purposes.

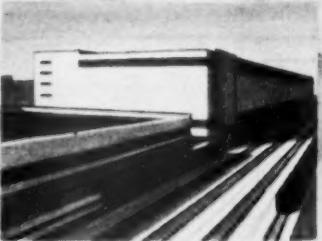
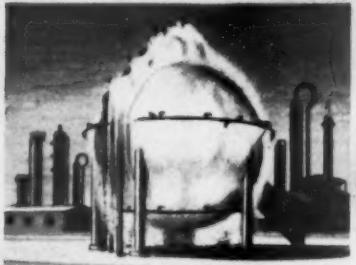
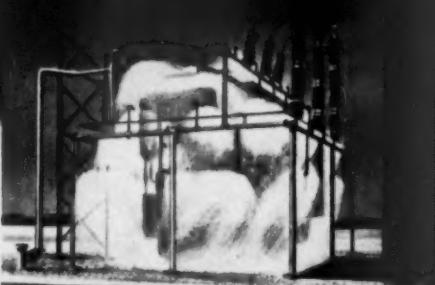
Second, he'll offer an annual rental—usually a nominal amount such as 50¢ or a dollar per acre, and usually with a stipulation that the rental payments will stop as soon as the land starts producing oil.

Third—and usually most important—the lease man will offer a royalty on all oil and gas taken out of the land. The more or less standard royalty is one-eighth of production—in other words, one barrel out of every eight produced—though in some areas landowners have held out for as much as one-half, and there's a growing trend toward one-sixth royalties. The amount of production kept by the operator—in the standard arrangement, seven-eighths—is called the "working interest."

• **Operator**—The lease man has now made his deal with the landowner, and has come out with—say—a seven-eighths working interest. What's his next move?

First, back to the Esperson Drugstore or some place like it.

Then, if he's working for himself, he might interest a drilling contractor in the land. He might offer the contractor half the working interest (or seven barrels out of every 16) and keep the rest himself. Or he might take his working interest and peddle pieces of it at a profit, eventually getting enough money to finance drilling on a cash basis. (The people who buy pieces of interest from him may, in turn, split



Dousing fires instantly...

*...is part of the "Blaw-Knox Job"
for Industry*

Blaw-Knox engineered fire protection systems stand guard where fire is a hazard to structures as well as contents. They are ready instantly to stop fire when and where it starts. Blaw-Knox fire protection systems pay for themselves in a short time through insurance premium savings.

Listed at the right are other Blaw-Knox products and services for such industries as—Chemical and Food Processing, Ferrous and Non-Ferrous Metals, Radio and TV, Gas and Petroleum, Plastics, Pulp and Paper. These products and services have been widely helpful in increasing production, improving performance and enhancing profits. We shall be glad to send you descriptive literature on any of them if you will write us.

MEMBERS OF THE BLAW-KNOX "FAMILY" AND SOME OF THEIR PRODUCTS

Blaw-Knox Equipment Division Blawnox, Pa.

Concrete Road Paving Machinery
Clamshell Buckets
Contractors Equipment
Gas Cleaning Equipment
Open Steel Flooring
Radio, TV and Transmission Towers
Steel Forms for Concrete Construction
Chemical and Process Equipment
Water Cooled Equipment for
High Temperature Furnaces

Bufflovak Equipment Division Buffalo 11, New York and Mora, Minn.

Machinery for the Chemical and Food Processing Industries

Specialized Machinery for the Dairy Industry

Chemical Plants Division

Pittsburgh 30, Pa.

Complete Chemical, Petrochemical, Industrial and Petroleum Plants

Footh Construction Equipment Division

Nunda, New York

Black Top Road Pavers

Concrete Road Pavers

Lewis Machinery Division

Groveton, Pa.

Rolling Mills and Auxiliary Machinery for Rolling Ferrous and Non-Ferrous Metals

National Alley Division

Blawnox, Pa.

Alloy Steel Castings for Extreme Temperatures, Abrasion and Corrosion Resistance

Power Piping and Sprinkler Division

Pittsburgh 33, Pa.

Prefabricated Piping Systems for High Pressures and Temperatures, Pipe Hangers

Automatic Sprinkler Systems for Fire Protection

Rolls Division

(Pittsburgh and Lewis Rolls)

Pittsburgh 1, Pa.

Rolls for Steel and Non-Ferrous Rolling Mills

Union Steel Castings Division

Pittsburgh 1, Pa.

Heavy Steel Castings



BRANCH OFFICES:

Birmingham 3, Alabama

Chicago 3, Illinois

Philadelphia 3, Pennsylvania

New York 17, New York

San Francisco 5, California

Washington 5, D. C.

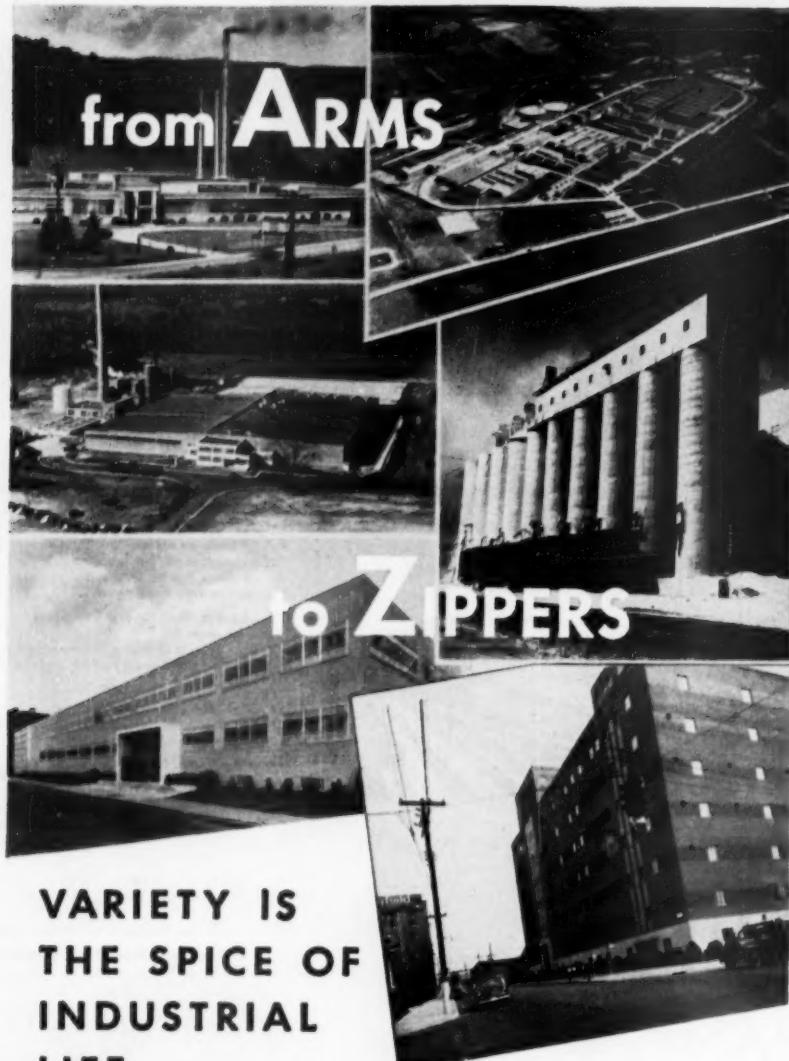
Tulsa 1, Oklahoma

Export—New York 17, New York

© 1953 Blaw-Knox Co.

BLAW-KNOX
Company

FARMERS BANK BUILDING
PITTSBURGH 22, PA.



**VARIETY IS
THE SPICE OF
INDUSTRIAL
LIFE**

in NORTH CAROLINA

Regardless of size or product, industries of every kind have found North Carolina's "Accessible Isolation" offers unique advantages for successful growth and prosperity. This growth in diversity of industry is matched by North Carolina's own "Variety Vacationland" where workers enjoy unlimited recreational facilities only minutes from their homes.

BIRTHPLACE OF MODERN FLIGHT



DEPARTMENT OF CONSERVATION AND DEVELOPMENT, RALEIGH, NORTH CAROLINA
Ben E. Douglas, Director

For a list of available sites and industrial buildings and other detailed information, communicate with

their pieces and sell them bit by bit. This can go on almost indefinitely. Often a working interest gets cut up into 1/256ths and even smaller fractions.)

If the lease man is working for a big company, his part in the affair is simpler. He merely puts together the block of leases and turns it over to the company. In return, he gets either a commission or an "override"—a part of the company's working interest. The company, of course, pays the landowner according to the terms drawn up by the lease man.

Why does a big company use freelance lease men instead of putting regular employees on the leasing job? Largely because, when a big company moves into an area, it doesn't want anybody to know about it. If the landowner knew, for instance, that Humble Oil & Refining Co. was interested in his land, he'd probably demand higher payment than from an independent lease man. And if other companies knew of Humble's plans, they'd come flocking to the area as fast as they could—and land values would skyrocket. The big oil company avoids these troubles by working through an independent lease man, who arranges all the land matters in his own name.

• Other Deals—The lease man can also get in on "dry-hole" and "bottom-hole" deals, which work like this:

Suppose four companies own acreage in a field that has not, as yet, been drilled. No one of the companies wants to spend money testing the field alone. So the four get together. Company A agrees to drill a well to a certain depth if the others will help financially. If the well proves dry (unproductive), companies B, C, and D agree to pay A a certain fee called "dry-hole money." If the well produces, A gets nothing from the other companies—but it now owns a producing well, and the other companies know oil is in the area.

"Bottom-hole" money is much the same, except that it is paid regardless of whether the well produces or not. It's usually a lower payment, since the paying companies have no hope of redeeming it. It's not a gamble like dry-hole money; it's a flat fee.

A lease man may hold a lease in the area, and thus may be anxious that some dry-hole or bottom-hole deal be worked out so that his land can be proven. He may arrange the deal among the four companies. Or he may solicit dry-hole money from them himself, hire a contractor, and drill the test well on his own tract.

Whatever his interests, though, chances are he'll do much of his work at some informal gathering place of oil men. If he's in Houston, he'll probably do it over a cup of coffee at the Esperon Drugstore.

LADISH *Controlled Quality* ASSURES METALLURGICAL SOUNDNESS

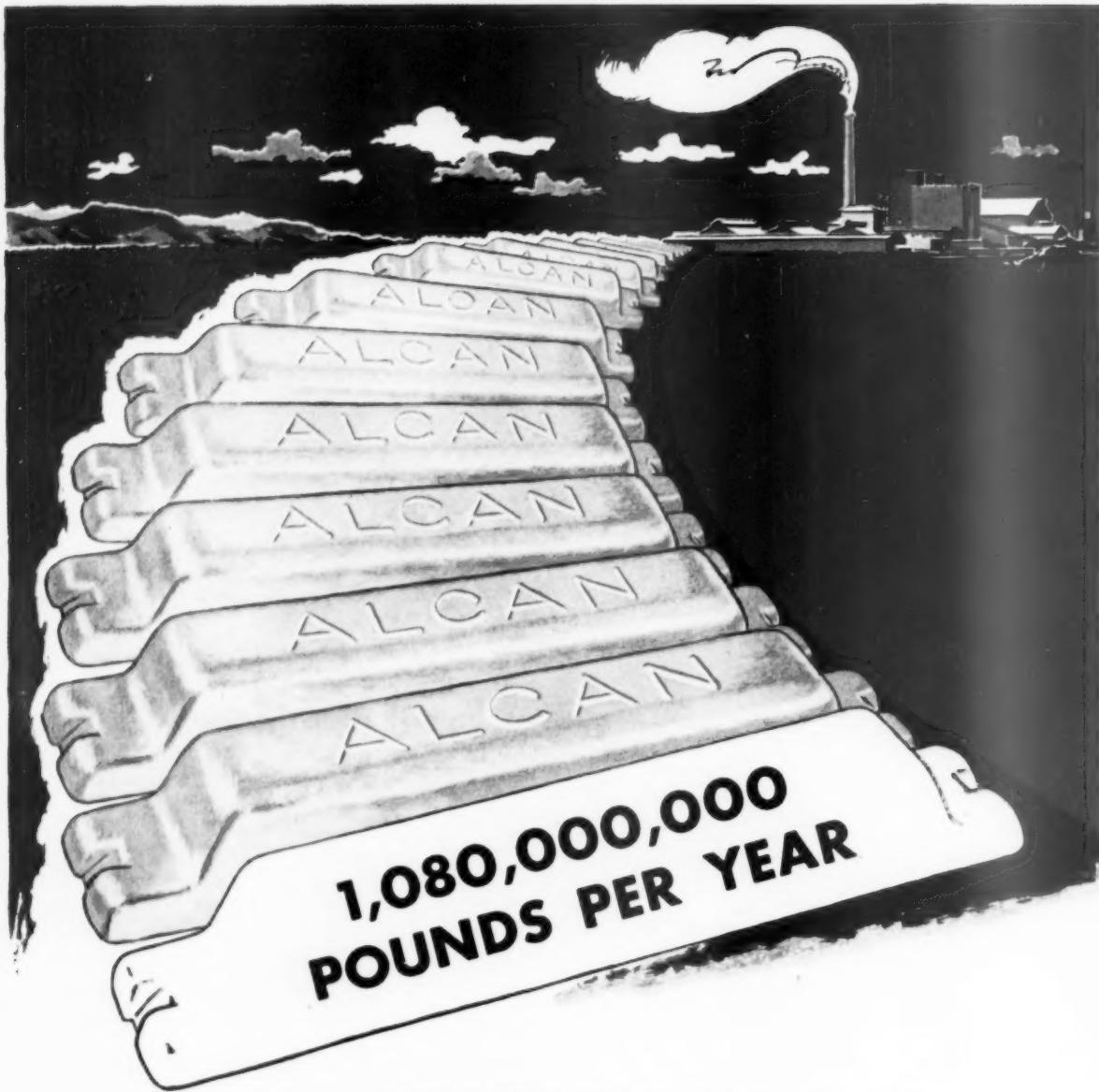


Photographed in Ladish
Metallurgical and Research Laboratories

Testing the breaking point of metal... proves Ladish fittings have ample strength to meet the test of maximum service

Optimum strength—proved by scientific test—typifies the outstanding values in Ladish fittings that result from special emphasis on sound metallurgy and advanced facilities. Shown here is modern Universal tensile testing equipment on which ultimate strength, yield strength, reduction of area and elastic properties are carefully measured to assure users of Ladish Controlled Quality fittings the metal quality essential for reliable performance.





Over a billion pounds — that's the estimated 1953 production of the Aluminum Company of Canada, Ltd. ("Alcan"). Next year's total: one billion pounds *plus* the initial output of Alcan's great new Kitimat plant. This plant, by itself, will eventually *double* Alcan's productive capacity.

With additional ingot soon available, perhaps we can help you plan ahead. We are the sole distributor for Alcan aluminum in the United States. If there is any information you need, our nearest office will be pleased to help.



ALUMINUM IMPORT CORPORATION

Distributing company of the ALUMINIUM LIMITED group, in the Western Hemisphere

Offices and agents in 40 cities

Cable address: ALIMPORT

630 Fifth Avenue, New York 20 • 20 North Wacker Drive, Chicago 6 • 505 Terminal Tower, Cleveland 13
510 West Sixth St., Los Angeles 14 • Av. Ing. Luis A. Huergo 1279, Buenos Aires • Rua Da Quitanda 96, São Paulo



PRESSURE CHAMBERS, where logs are impregnated with preservatives, are just one of the many methods used in . . .

Wood: Improving on Nature

Wood—light, strong, and easily workable—is the oldest and probably the most generally used construction material. Unlike minerals, which can be exhausted, wood is a renewable resource. The supply can actually be increased, by proper conservation.

Like all things, wood is not perfect. It tends to warp, expand, contract, and crack, as humidity changes. Fire,

decay, termites and other insects take a tremendous toll each year.

Until the 1880s, no one got very excited about the comparatively rapid deterioration of wood. Supply was so plentiful that it was easier to replace a rotting piece of lumber than to try making it last longer.

• **First Scarcity**—In the U.S., no real wood shortage was felt until World

War II. Under that immense drain, the dire prophecies of the conservationists began to come true. Many people went to work to make wood a better and more widely available structural material. Some of the results of their work are now beginning to show up as improvements of older techniques:

• Preservatives have made possible the structural use of many types of

"JOB-FITTED COMBINATION SCRUBBER-VAC

PUTS FLOOR-CLEANING ON PRODUCTION BASIS

throughout our plant



*-Says Superintendent of Maintenance
VICTOR ADDING MACHINE COMPANY*

Victor Adding Machine Company, Chicago, insists on maximum production in floor-cleaning as well as in manufacturing. Like other production-wise industrial concerns, Victor cleans floors with a Job-Fitted Combination Scrubber-Vac! This single unit

Completely Mechanizes Scrubbing

—applies the cleanser, scrubs, flushes if required, and picks up — all in one operation! Job-fitted to specific needs, a Scrubber-Vac provides maximum brush coverage. Model 213P, shown in illustrations at left, is designed for heavy duty scrubbing of large-area floors. It has a 26-inch brush spread, and cleans up to 8,750 sq. ft. per hour! Finnell makes still larger sizes — in gasoline as well as electric models — and also sizes for smaller operations. From this complete line, you can choose the Scrubber-Vac that will put your floor-cleaning on a production basis and reduce labor costs. And you can lease or purchase the machine. Maintenance men like the convenience of working with a Scrubber-Vac. This all-in-one unit is self-propelled, and there are no switches to set for fast or slow — slight pressure of the hand on clutch lever adjusts speed to desired rate.

It's also good to know there's a Finnell Floor Specialist and Engineer nearby to help train your operators in the proper use of Finnell Equipment and to make periodic check-ups. For demonstration, consultation, or literature, phone or write nearest Finnell Branch or Finnell System, Inc., 3810B East St., Elkhart, Ind. Branch Offices in all principal cities of the United States and Canada.

FINNELL SYSTEM, INC.
*Originators of
Power Scrubbing and Polishing Machines*



BRANCHES
IN ALL
PRINCIPAL
CITIES

fast-growing wood that formerly were used only for burning.

• Fire-retarding chemicals, particularly those mixed with preservatives, are finding increased use on wood in industrial installations where fire fighting would be difficult, or where there is expensive equipment to protect.

• The development of wood laminates, alloys, and chemical treatments is getting closer to curing swelling caused by dampness, long the biggest drawback to using wood for close tolerances.

Impregnation under pressure is the most frequently used method of treating wood. Variations are many, but a fairly typical pressure method uses horizontal cylinders from 6 ft. to 8 ft. in diameter, and from 35 ft. to 200 ft. long. Logs are run into the cylinders on trams riding rails in the bottom. Then the doors are sealed, and the preservative is forced in under pressures up to 200 psi. Different woods, of course, require radically different treatments.

• Limits—Despite its many advantages, treated wood is still a specialty item; it will probably remain that way if forests are managed scientifically. Still, the small percentage of the total wood harvest treated lasts five times as long as untreated wood. The American Wood Preservers Assn. says that treatment saves about 10.8-billion board feet a year. If no wood were treated, the U.S. would have to cut about a third again more timber each year.

Treating timber is no radical innovation; the Phoenicians and Egyptians found means to preserve wooden structures in their day. But preservation wasn't promoted to the rank of an industry until the 1880s, when railroad expansion had created the need for more durable ties.

• Fungi—The basic idea of wood preserving is to eliminate conditions favorable to the growth of fungi. These low forms of plant life require food, air, a given amount of moisture, and suitable temperatures. Wood won't decay if any one of these needs is eliminated. For example, it won't decay if continuously submerged in water.

Dozens of methods have been developed to upset fungus housekeeping. Charring and tarring is one of the oldest. Various coatings and sheaths have been developed. Most efficient of all is the impregnation of the wood with preservatives poisonous to the fungi; that prevents decay and scares off termites, marine borers, and their myriad cousins.

The railroads became the proving ground of wood preservation, once they realized that it was prohibitively costly to replace untreated ties every five years. The same wood, treated, would last 20 years or more. Many methods of painting and dipping were

a new star
BREAKS INTO THE
MATERIAL HORIZON—

ALITE
SINTERED
METALLIC
OXIDES

Born from basic material research, kin to powdered metals, the Alites bring to industry new materials of unusual properties —

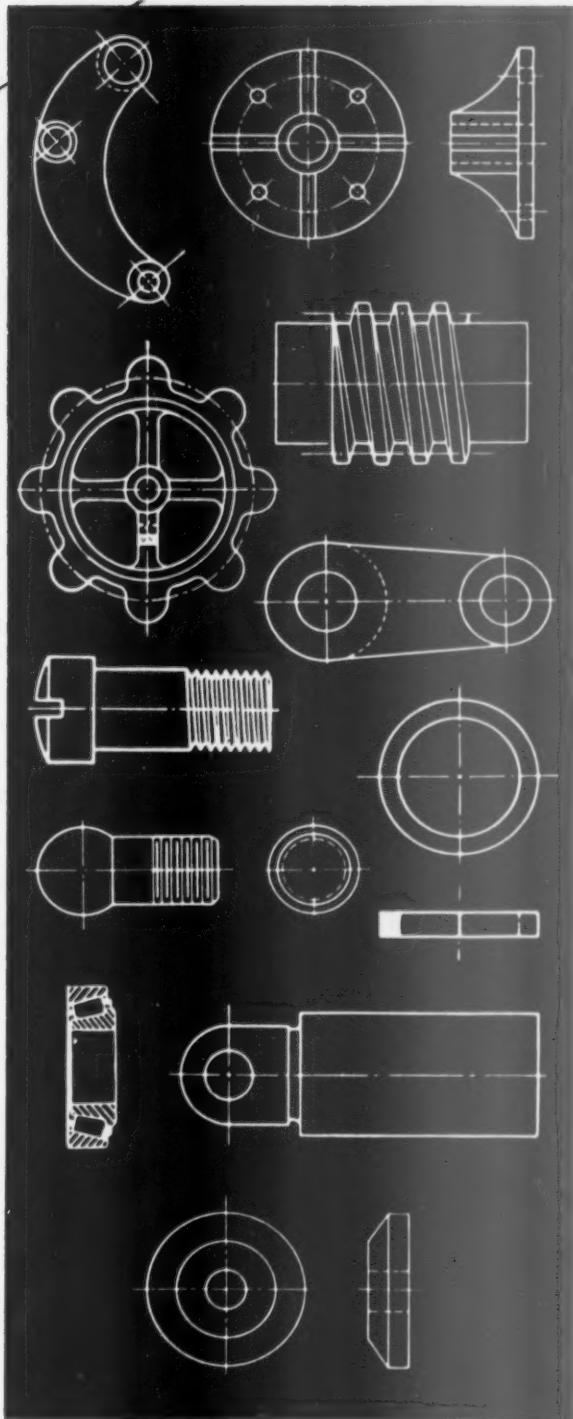
Materials that only diamonds will abrade; materials that have virtually no ductility; materials approaching the strength of metals, but without their limitations; materials that can be made into tough low-loss electrical insulators for high temperatures; materials that will operate beyond 3000°F; materials that seldom need lubrication; materials that defy corrosion; materials that can be made completely impermeable; and materials that can be made into work-a-day mechanical objects which no metallic raw material can equal.

Alite is a generic term we use to describe a series of blended, formed and sintered metallic oxides, varying as required by specific usage. Physical, electrical and chemical characteristics may be modified over wide ranges.

While for the present, Alites cannot be formed into objects much larger than 12" x 12" x 24", any degree of accuracy and any degree of finish is possible.

**WHAT CAN THE ALITES
MEAN FOR YOU?**

Frankly, we don't know. At present they are costly to produce and to finish. But for applications where cost is not primarily an object, the Alites may offer advantages to the design engineer possessed by no other available material. We will be happy to investigate with you the possible application of the Alites to specific problems you may have.





Our business is wearing out salesmen's shoes!

■ Sales increases of 15%, 28%, 65%, 105%, 660%—often won in the face of industry or seasonal slumps—prove that Cappel, MacDonald specialists know how to create sales by increasing sales effort.

How is it done? By applying the concentrated power of all the things a man wants most to the solution of a given sales problem.

Every man wants recognition . . . wants to shine in the eyes of friends, family, associates.

Whatever his normal standard of living, every man wants something extra . . . some luxury he doesn't feel free to buy.

Every man has a competitive spark . . . a spark that bursts into driving energy once he's given a clear chance to excel.

When Cappel, MacDonald rolls all these motivations into one merchandise incentive campaign—every salesman worth the name will wear his shoes out trying to win.

We know what works—what to avoid! Cooperating since 1922 with the nation's top sales managers and

sales promotion managers, Cappel, MacDonald specialists have accumulated an invaluable fund of information which doesn't cost you a cent. We know how to spread campaign excitement throughout an organization. How to put wives and families to work as "assistant sales managers." How to power a sales drive with prizes that each man finds desirable and attainable. How to turn a sales campaign into the world's best refresher course . . . giving clients immediate profits on their investments plus a better-trained, harder-working, self-confident sales force.

Large business or small, if you have salesmen (or jobbers', or dealers' salesmen) you can profit from Cappel, MacDonald service. Why not ask us to prove that statement? Without cost or obligation, the nearest C-M office will provide detailed case histories, and work out specific suggestions showing how this powerful plan can be applied to your kind of business, your kind of sales problem.

Write today for a free copy of "The Incentive Story." There is no obligation, of course.

Cappel, MacDonald and Company

Originators of Merchandise Incentive Campaigns

129 S. LUDLOW ST., DAYTON 1, OHIO . . . Offices in Principal Cities

"... for these new markets, distribution is quite a problem . . ."

WOOD starts on p. 75

tried; eventually pressure impregnation proved the most efficient. The electric utilities, with their seemingly endless need for poles, came to the same conclusion.

With ties and poles making up 75% of the business, the wood preserving industry has grown to include 290 companies that treated the equivalent of 3.8-billion board feet of timber. Creosote is used the most.

Creosote, though, has a serious drawback. It tends to exude an oily substance on the surface of the wood; some people's skin is allergic to it.

• **Continuing Hunt**—To get around this, many materials are still being tested in the quest for a preservative that is permanent, inexpensive, clean, and easy to apply. Since World War II, a dozen or so solid materials have gained prominence. Of these, the most promising seems to be pentachlorophenol (penta) a synthetic that is being tested by utilities in populated areas where they need "clean" poles.

With all preservatives, the degree of penetration depends on the ratio of sapwood and heartwood in the lumber. That's because heartwood is more resistant to decay and insects. Indeed, in the old wasteful days the fast-growing sapwood was thrown away, with only the slower growing heartwood used in structural work.

The advent of pressure treatment has made sapwood roughly as acceptable commercially as heartwood. All sorts of trees are used now that were formerly regarded as useless. Southern yellow pine is a favorite example. With proper treatment it lasts 25 years; untreated its life is perhaps two years. These fast-growing trees have eased the strain on cedar and chestnut for use in poles.

• **Markets**—Preservation has done more than augment the varieties of usable wood, it has also attracted new customers. Since the war, farmers have been turning to foundationless outbuildings, with treated poles serving as support. And the do-it-yourself movement has created a home market.

For these new markets, distribution is quite a problem. The consumer is likely to have a hard time finding a supplier of pressure-treated poles for fencing. Paint-on treatment at the site is a limited alternative, but it doesn't give the durability that pressure-treatment does for wood that will be in contact with the earth.

• **Inflammability**—In fire-retarding, new applications are turning up. No wood

YOU'LL NEVER SEE

a salmon leap without looking



Every flashing leap forward—carefully timed and executed . . . every acrobatic flip calculated to bring this stout-hearted fellow nearer his destination in the cool, quiet breeding shallows. There's no lack of foresight here to reach a planned objective.

It pays to look before leaping . . . especially when you're developing a new product that requires metal parts. Planning ahead gives you time to look at the newest techniques, processes and materials . . . and all the important advantages of castings by Campbell, Wyant and Cannon. With parts engineered and cast by CWC you will probably find unlimited possibilities in product design.

Why not let CWC engineers help your product head upstream with castings that machine *easier*, wear much *longer* and cost much *less*. Then maybe you'll have more time for the leaping salmon . . . from the business end of a rod and reel!

**CAMPBELL WYANT AND CANNON
FOUNDRY COMPANY**
Muskegon, Michigan



GRAY IRON, ALLOY IRON AND STEEL CASTINGS

You Can Rely on...

CLARAGE



40 Years in
PHARMACEUTICALS

Manufacturers of pharmaceuticals—like other American industries—have a high and long-standing regard for Clarage fans and conditioning units. Much of the process and conditioned air so vital to pharmaceutical research and production is furnished by Clarage equipment.

Air Handling and
Conditioning Headquarters
CLARAGE FAN COMPANY
KALAMAZOO, MICHIGAN

IN CANADA: Canada Fans, Ltd., 4285 Richelieu St., Montreal

- Process AIR
- Conditioned AIR
- Ventilation AIR
- Heated AIR
- AIR at All Fan Pressures

97

OF AMERICA'S
100 LARGEST
CORPORATIONS
Use Clarage Fan
Equipment



ease the "pressure points"
in your business!

with "clear line" inside communication

talk in
2 seconds



ELECTRONIC
AMPLICALL
INTERCOMMUNICATION

SEE YOUR CLASSIFIED PHONE BOOK

For your nearest
AMPLICALL special-
ist, look under "Inter-
communication" in your
classified phone direc-
tory—or write direct for
full information.

RAULAND-BORG CORPORATION
3523-T Addison St., Chicago 18, Illinois

Send complete details on AMPLICALL.

Name.....

Address.....

City..... Zone..... State.....

"... only about half of a piece of wood is solid . . ."

WOOD starts on p. 75

can be really fireproof, but for 40 years materials have been on the market that prevent it from bursting into flame. The wood is impregnated with chemicals that either give off smothering gas or turn to glass when heated, so that oxygen is cut off from the fire. Since the war, building officials have been calling for treated wood to cut down on flash fires in public buildings.

Unfortunately, the fire-retarding chemicals are useful only indoors. Most of the formulas are water-borne, and can't stand long weathering. Many companies are looking for an answer, which would find a ready-made market in the 10-million ft. of railroad trestles, now treated with creosote and presenting a constant fire hazard.

• **Warping**—Worst of all wood's faults is the tendency to swell and contract as humidity changes. This is rapidly being overcome by research into the intricate structure of wood. Only about half of a piece of wood is solid, the rest is air and water trapped in cavities. It's this air and water that cause most of the trouble.

The swellings or contractions generally occur in the horizontal plane. To cure it, wood is cut in thin slices and then glued together in the form of sandwiches. The laminations are glued to one another at angles, so that each slice tends to hold its neighbors in shape. This plywood could not last outdoors in the early days of the industry, because rain washed away the animal glues that were used. Now the bonding is done with synthetic resins, often stronger than the wood itself.

• **Stability**—Other methods are used for keeping wood stable:

• It is possible to squeeze out the air and water under great pressure.

• Cavities can be filled under pressure with plastics.

• The chemical treatment of wood under pressure is getting an increased play. Forest Products Laboratory, and a number of chemical companies, are working on such processes. One panel maker, Upson Co., recently patented a process and is running pilot plant tests for structural wood, paper, rayon, and other products.

Upson treats wood and fibers with a group of chemicals that have an affinity for cellulose. The physicochemical marriage of the chemicals and the cellulose tends to reduce expansion and contraction. The treatment changes neither the appearance nor the low density of the wood, which can be used for all commercial applications.



HORROR STORY WITH A HAPPY ENDING

Horrible? The kids like 'em that way. So the manufacturer is glad to oblige . . . turning out a small mountain of these masks for Halloween. But stocking thousands of inventory-shy dealers just in time for "trick or treat" — that's the real "horror" from a shipping standpoint. How does the manufacturer lick it? This way —



Deliveries completed on schedule to thousands of retail stores everywhere in the country. By shipping collect, manufacturer avoids tying up funds in shipping charges.



Instead of tying up his plant with a monumental routing, sorting and billing job, manufacturer makes one phone call for one pickup of whole lot — by Railway Express.



Masks are quickly routed through strategically located Railway Express terminals. Modern equipment speeds sorting and quickly gets shipments on their way.



Retailers avoid worry about inventories of seasonal merchandise by specifying, "Ship by Railway Express!" Fast turnover is made possible by swift, sure deliveries.



Shipping or receiving, take advantage of the personal attention and many unique benefits of Railway Express service. Ask your local Railway Expressman for details.

It pays to use the complete shipping service

No size or weight limit • Pickup and delivery, within prescribed vehicle limits, in all cities and principal towns • Liberal valuation allowance • Receipt at both ends • Ship collect, prepaid, paid-in-part, or C.O.D. • Ship by Air Express for extra speed.



Smoke Signal
FROM
Lewistown
**TO INDUSTRIES
SEEKING AN
INDUSTRIAL SITE**

Looking for labor supply, access to markets and supply sources? Transportation, power, and fuel? Lewistown, Pa., has them all and plenty more, in good supply with modest price tags. Investigate this small inland city that enjoys an urban economy and the advantages of metropolitan proximity to supply and demand sources. Lewistown stands alone in its central location which is practically equidistant from such centers of commerce as New York, Philadelphia, Baltimore, Cleveland, Pittsburgh, Buffalo, and the many markets lying between. Write for our brochure and get honest, pertinent facts about Lewistown and what it has to offer industries on the move. Location in Lewistown is simple and rapid through the application of a well organized plan that provides for location, building design, construction and lease . . . all at guaranteed costs.

Consider Lewistown—
Write for Information
Digest Today.



Lewistown
**INDUSTRIAL DEVELOPMENT
CORPORATION**

10 NORTH BROWN STREET
LEWISTOWN 3, PENNSYLVANIA

EARL S. WELLER • PRESIDENT

THE PRODUCTION PATTERN

Setting Standard for Noise

FACTORY din is one thing that plant engineers have yet to control or eliminate (BW—Oct. 20 '51, p56).

Each year, industry creates new sources of machine-made racket. It builds bigger, heavier presses for fabricating metals, uses more varieties of small, hand-held power tools. At aircraft plants, the high-pitched scream of jet engines has replaced the baritone of the piston.

One waggish engineer has suggested that the robot factory of the future will come equipped with high fidelity noise, though there will be few if any workers around to listen.

Hi-fi or no, noise has become a big worry among specialists in industrial hygiene. How, they ask, can we measure the effects of noise on personnel? The question gains more force as a growing list of companies is called on to pay compensation to workers who claim to have lost their hearing. To handle such claims, companies and their lawyers need to know a lot more about noise and its effects on people.

M EASUREMENT of noise is partly a technical, partly a physiological job. For the past year, the American Standards Assn. has had a group of experts researching industrial noise, in the hope of establishing standards. The standards would cover such measurements as:

- The levels of noise, and the periods of exposure to them, that workers can safely stand.
- The types and degrees of hearing loss that can be classed as handicaps.
- Which employee groups—those working in plants, offices, and the like—are subject to noise levels approaching the danger point.

Last week the researchers gave a preview of their findings at the national conference of ASA in New York City. A full report is to follow, around Nov. 15.

This job of setting standards for industrial noise is one of the toughest ever tackled by ASA. Previously, the standards it has been called on to set have all involved physical factors that could be gauged with a micrometer or an electric meter. Thus, one set of ASA standards might give specifications for the

threads of nuts and bolts, so that a nut made in the U.S. will fit a bolt made in Canada or South America.

In industrial noise, though, hard-to-measure human factors have to be fitted in with the mathematical ones. Thus, ASA has standards for measuring all kinds of sound, and for gauging the loss of human hearing. The trouble is, the measurements are standardized, but a group of humans isn't.

One person reacts differently than another to noise. Hearing fades as a man grows older, a quite normal condition called presbycusis. Thus, standards must be adjusted in order to compare the hearing of a man of 65 with one in his 20s.

T HE problem for ASA is to work all these variations into a means of measurement that can be applied to an individual or a group.

Some ASA findings should be cheering to industrialists. They show that plant noise won't bring on wholesale deafness as some have predicted.

Generally, the longer the exposure to noise, the greater the loss of hearing. An airline pilot working a few hours a day will probably be affected less than a technician testing aircraft engines all day long. Yet noise is a sort of anesthetic to hearing. Both pilot and technician will regain part of the lost hearing on their weekend off.

E VENTUALLY, the finished standards will be dropped into the laps of lawyers and the courts. The question for them will be: When does hearing loss merit compensation? The ASA men say that will be almost as hard to answer, as was establishing the standards for noise.

Many workers, regardless of age or physical condition, can lose their ability to hear in the high frequency range, the aural wavelengths that are of little use to most people. That type of loss is so frequent that industry could go broke providing compensation for it. Just as lopsided at the other extreme would be the interpretation that loss of hearing should be compensated only when it can be proved that loss of wages is a direct result.



Reinforced plastic bread trays made with BAKELITE Polyester Resins withstand hard use; have long service life. Manufactured by Molded Fiberglass Tray Company, Linesville, Pa.

Bread delivery the modern way! ...by REINFORCED glass fiber plastic tray

More and more bakeries are profiting from faster, less costly deliveries thanks to a new bread handling system. The key to it is a reinforced glass fiber plastic tray made with BAKELITE Polyester Resins. This tray speeds truck loading. It enables salesmen to make deliveries in less time, with less effort. And bread is handled *only once* from wrapping machine to store shelves.

In a typical tray system, 10 or 12 loaves—depending on size—are slid onto a tray after wrapping. Loaded trays go by conveyor or cooling racks to the loading platform where they are placed on angle irons in the truck. Light and smooth, the loaded trays slide forward as the truck travels. The salesman re-

moves them readily from the front of his truck for delivery into the store.

The tray, made by Molded Fiberglass Tray Company, is light in weight, moisture-resistant, strong . . . stronger than steel on a strength-weight basis! Its shape allows space-saving nesting of "empties" in delivery truck and bakery. Its smooth surfaces won't snag wrappers, and are easily cleaned, reducing maintenance to a minimum. Colors and printing can be molded into the tray.

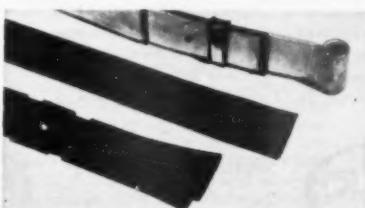
This is another example of product improvement resulting from the use of reinforced glass fiber plastics made with BAKELITE Polyester Resins. These materials have found applications rang-

ing from light, graceful home furniture to vital aircraft parts. Perhaps they can inspire new products and designs for you. Bakelite Company engineers will be glad to help. Write Dept. SO-61.

BAKELITE TRADE-MARK POLYESTER RESINS

TRADE  MARK

BAKELITE COMPANY
A Division of
Union Carbide and Carbon Corporation
UCC
30 East 42nd Street, New York 17, N.Y.



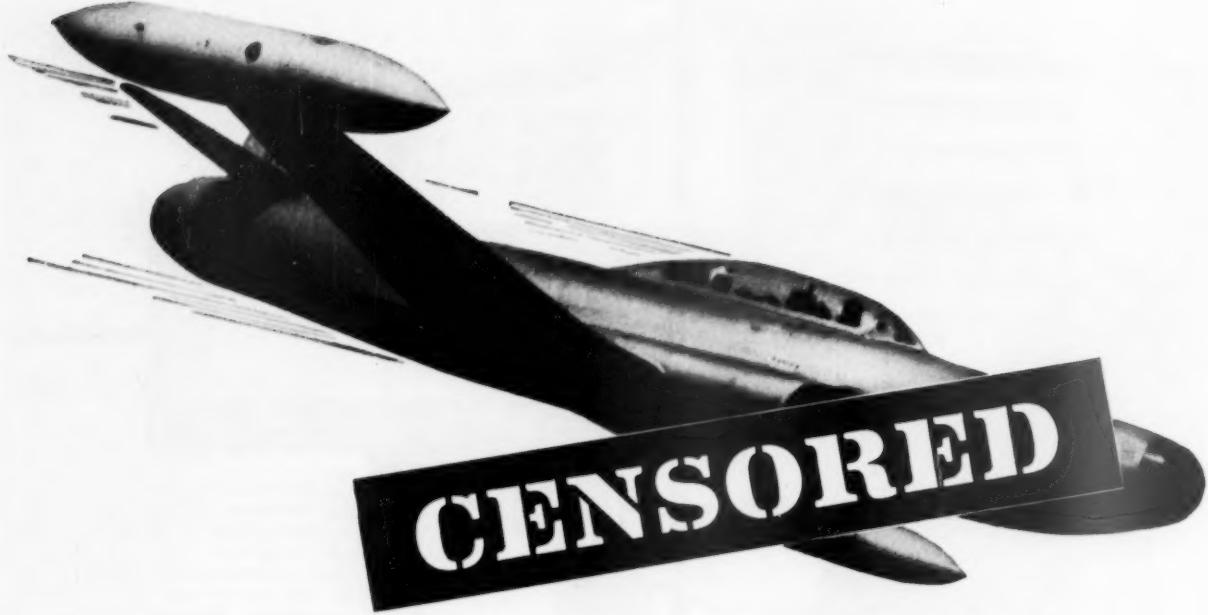
SPRING PADS. injection molded of BAKELITE Polyethylene, separate spring leaves, keep dirt out, prevent metal contact. Give long service at low cost. Made by Spring Perch Co., Lackawanna, New York.



PERMANENT LEGIBILITY is assured by tags laminated of BAKELITE Rigid Vinyl Sheets. Virtually any combination of print and color available. Polished and "write-on" finishes can be on the same tag. By Duramark, Inc., Port Washington, N.Y.



BRISTLES on this sponge mop are BAKELITE Styrene Plastic monofilaments that retain stiffness, withstand soap and detergents, won't curl. Dirt can't penetrate. Made by Buff Products Co., Port Chester, N.Y.



CENSORED

**BUT YOU CAN GET
THE METAL AND ITS BENEFITS**

Just the details of what this new iron is being used for by the Navy and Air Force are secret.

The iron itself is not restricted.

You can learn from our metallurgists the unique characteristics of this iron and why it is replacing much more expensive metals in the still-under-wraps government applications.

Chateaugay iron is high in carbon, extremely low in sulphur and phosphorous, and copper-free. It is made from ore out of the Chateaugay mine in the Adirondacks. There's no other ore like it in the Western Hemisphere.

Chateaugay Pig Iron is one of the exclusive products which give muscle to Republic's

3-Step Service to Iron and Steel Users:

1. to produce more types of iron and steel than any other steel company;
2. to make recommendations of the *exact* type you need: (Our unexcelled range of irons and steels permits us to do this);
3. to keep trained men in the field who can pass along to you our experience with the varieties of steels, irons and fabricating techniques.

Our field men have shown many customers how to use irons and steels more profitably: even to switching them to lower-cost irons or steels. This enlightened selling certainly is not—like Chateaugay Pig Iron—an exclusive property of Republic Steel. But it is a deliberate policy of Republic and you can depend on it.



The Adirondack region, where Republic's Chateaugay mine is located, was the source of iron for American Revolutionary forces. The original cannon of Ft. Ticonderoga are believed to have been made from this same kind of ore which is now making news among metallurgists as a "new kind of" iron. Photo courtesy of the Ft. Ticonderoga Association.

REPUBLIC STEEL



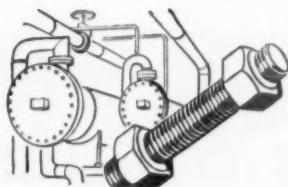
**WORLD'S WIDEST RANGE
OF STEELS
AND STEEL PRODUCTS**



**Steels and steel products
for almost every need.
Here are a few of them.**



BERGER STEEL SHELVING—A wide variety of standard-sized units that provide the answer for every storage need. Flexible, strong, long-lasting. A free planning service is available.



REPUBLIC STUD BOLTS—Made of Republic Alloy Steel—a dependable means of fastening where high temperatures and high pressures are encountered. Accurately threaded—easy to assemble and disassemble.



TRUSCON METAL WINDOWS—The most complete line of steel windows in the world—residential, institutional and industrial. Several styles in aluminum. A new windowed wall panel, too.

* * *

Republic Steel Today:

ore mines here and abroad; lake and ocean-going ships; coal mines; furnaces and huge steel mills, North and South; steel fabricating plants across the Nation and in Canada; sales offices in principal cities; PLUS 70,000 men and women working together to produce steels and steel products to help build and protect a stronger America. Republic Steel Corporation, General Offices, Cleveland 1, Ohio.

Metals Boom Chemicals, Too

"Sometimes, I wonder whether we're in the metals industry, or the chemical business." That's the way one mining specialist recently described metal's growing dependence on chemical producers for raw materials.

He was talking about titanium (chart, above), but what he said applies to the metals industry in general.

Right now, several of the "wonder" metals are breaking into big-scale commercial production: titanium, lithium, the rare earths. Some of the older metals, such as uranium, copper, nickel, and cobalt, are being adapted to new kinds of processing.

In nearly every case, the metals are processed with chemicals in one or

more operations for converting ore into metal. Many of the new metals are only now starting to build up a demand for raw materials in the chemical market. But as their appetites grow, the metals, chemical producers feel, will keep the chemical boom growing, might later cushion a possible drop.

• **Expanding Needs**—Capacitywise, the fastest-growing metal just now is titanium. In the next 20 years or so, U.S. titanium output will expand by 30 times, probably more. That means a big call for three raw materials—coke, chlorine, and magnesium—besides rutile (titanium dioxide), the basic ingredient.

Some of the other metals such as



to Transportation and Industry...

From humble beginnings in 1868 —when Cleveland was only a struggling industrial community on the shores of Lake Erie—National Malleable and Steel Castings Company has developed into a world-wide organization.

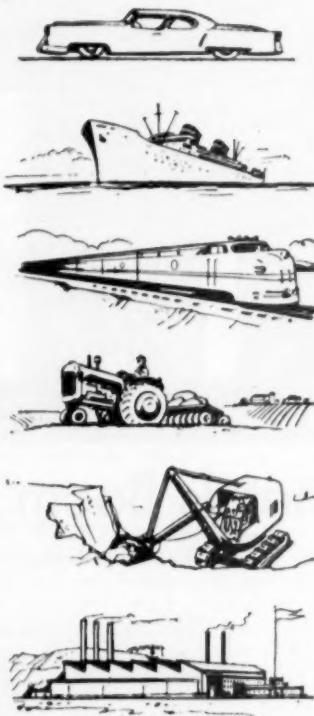
During these 85 dynamic years of our country's industrial expansion, National has pioneered in developing new methods and processes for producing castings of the highest integrity for many industries.

Today, we serve the automotive, marine, railroad, farm equipment, mining, and defense industries from six plants strategically located throughout the nation. Each foundry is modern . . . fully mechanized

. . . completely equipped with all necessary facilities, including metallurgical laboratory—for quality-controlled volume production.

For your malleable and steel castings let us match our experience and service against your production problems and production schedule.

A-8360



**NATIONAL
MALLEABLE AND STEEL
CASTINGS**

COMPANY
Cleveland 6, Ohio

zirconium and the rare earths probably won't grow so fast, or reach the volume of titanium. But, all told, the chemical requirements of these metals alone promise some day to come close to matching the chemical producers' current total annual take of about \$6-million from the metals industry.

• **Supplies**—No one in the industry feels that any great materials shortages will result from the future boom in metals. But some of the materials sources may have difficulty meeting the demand. Coke, for example, might be hard pressed to fill titanium's needs, after it gets rolling.

The coke industry's past expansion has actually been one big race with time—with new ovens getting into operation just as old ones become ready for the junk yard. In the past 15 years, coke capacity has expanded about 80%. But the demand from benzene users—traditional coke-oven customers—has multiplied nearly five times, and has been helped by growth of the petrochemical industry. Now coke is catching up.

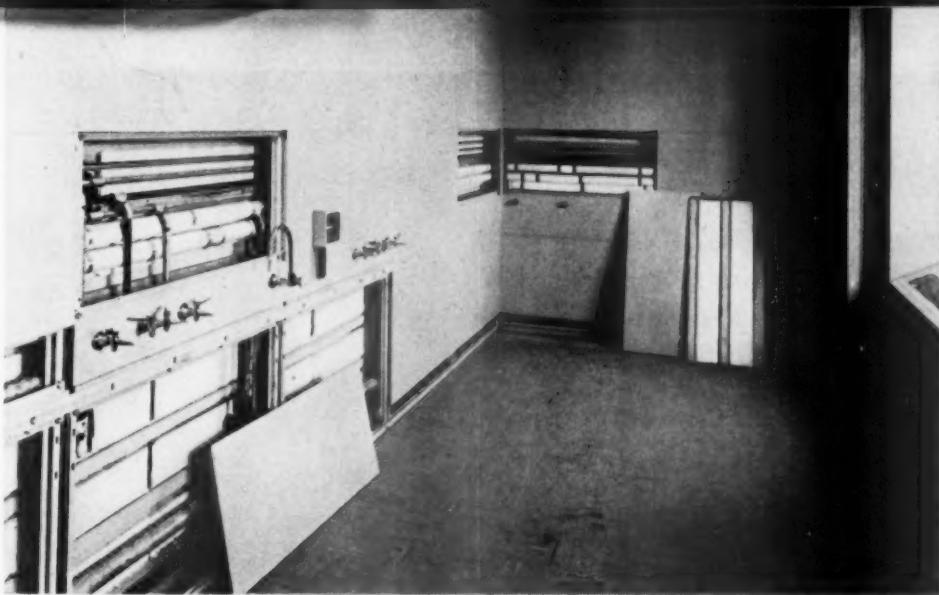
• **Further Ahead**—Some time in the future, it's likely that the high-tonnage, household metals such as copper, cobalt, and nickel will bypass conventional smelting for chemical treatment. Then the big demand for chemicals will probably be split among anhydrous ammonia and various acids.

PRODUCTION BRIEFS

Hydraulic press designed specifically for compacting powdered metals was unveiled last week at the National Metal Exposition in Cleveland. Developed by Baldwin-Lima-Hamilton Corp. for Precision Grinding Wheel Co., it is so engineered that a quick, accurate adjustment for changes in density or weight can be made while the press is in operation.

Plastic pipe is now delivering crude oil from a storage tank on the Fort Peck Indian Reservation to a tank car siding on the Great Northern RR in Poplar, Mont. The 3-in. pipe, made of Tenite butyrate plastic, is the longest line (9 mi.) of its kind on record.

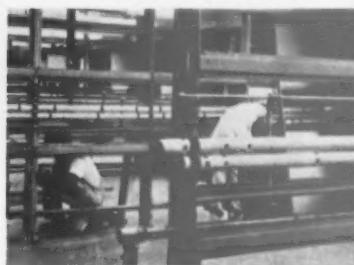
Cemented carbide cutting tools containing 11% tantalum as well as tungsten, titanium, and cobalt permit up to 30% greater efficiency on heavy steel machining, according to an announcement from Carbolyo Dept. of General Electric Co. In shop tests the new carbide cutting tools are said to have taken successful cuts of 1-in. depth with the tool traveling at a speed of 80 to 100 surface feet per minute.



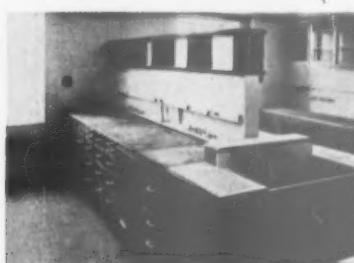
National Institutes of Health, Clinical Center, Bethesda, Maryland. View in unfinished space showing access to service piping within 6" thick VMP MOBIL-LAB-WALLS.



National Institutes of Health, Clinical Center, Bethesda, Maryland. Building exterior, north side.



Installation in progress at National Institutes of Health, showing VMP MOBIL-LAB-WALL framing with service piping.



Completed laboratory, with VMP MOBIL-LAB-WALLS peninsular partition and exterior wainscoting.



Completed laboratory in use. VMP MOBIL-LAB-WALL partition at right. VMP exterior wall wainscot at left.



FREE!

VMP MOBIL-LAB-WALLS brochure, two-color manual with details and complete descriptions to help you achieve laboratory construction economics and maximum efficiency. Write Virginia Metal Products Inc., Dept. BW-10, 1107 First Nat'l Bank Bldg., Pittsburgh 22, Pa.

VIRGINIA METAL PRODUCTS, INC.

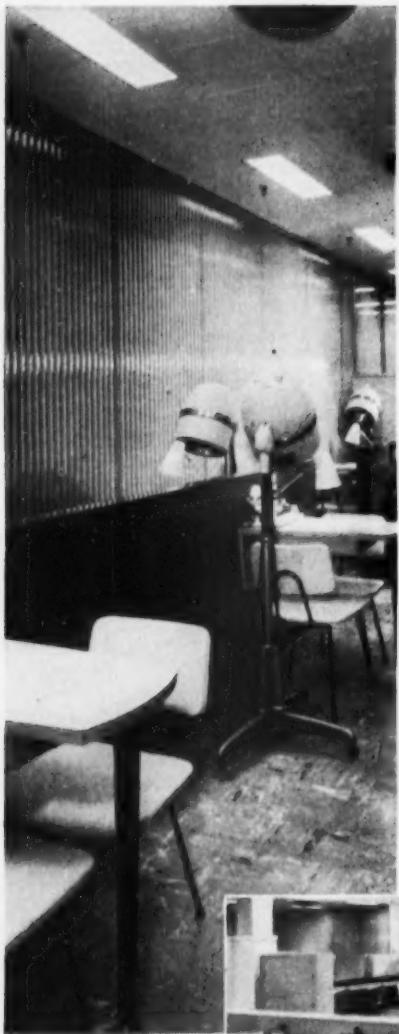
PLANT: ORANGE, VIRGINIA

You get the best when you buy from the leader, and VMP Leads The Industry.

Also leading designer, manufacturer, and erector of movable steel MOBILWALL partitions, commercial and industrial conveyors, vertical filing systems, steel doors and frames, and library equipment.



Macy's highlights Beauty with GLASS



Write today for free booklet, "Figured Glass by Mississippi." Photographs of actual installations. Many ideas on ways to use this exciting new medium.

MISSISSIPPI *Glass* COMPANY

88 ANGELICA ST. SAINT LOUIS 7, MO.
NEW YORK • CHICAGO • FULLERTON, CALIF.

WORLD'S LARGEST MANUFACTURER OF ROLLED, FIGURED AND WIRED GLASS

88

NEW PRODUCTS



Facsimile Plus Xero

The Navy these days is busy testing the instantaneous transmission of documents over long and short distances, using its own high-speed, low-cost facsimile equipment. The machine is an advanced application of xerography, the use of electrical charges to transfer a document to a master copy for use in duplicating machines (BW-Mar.28'53, p186).

It was three years ago that the Bureau of Ships got the idea for a machine that would get rid of certain features it disliked in available commercial equipment. The end product was developed and built under contract by Haloid Co., which has done pioneering work on xerography, and Radio Corp. of America. Primarily designed for military purposes, it is likely to have later commercial applications of even greater importance.

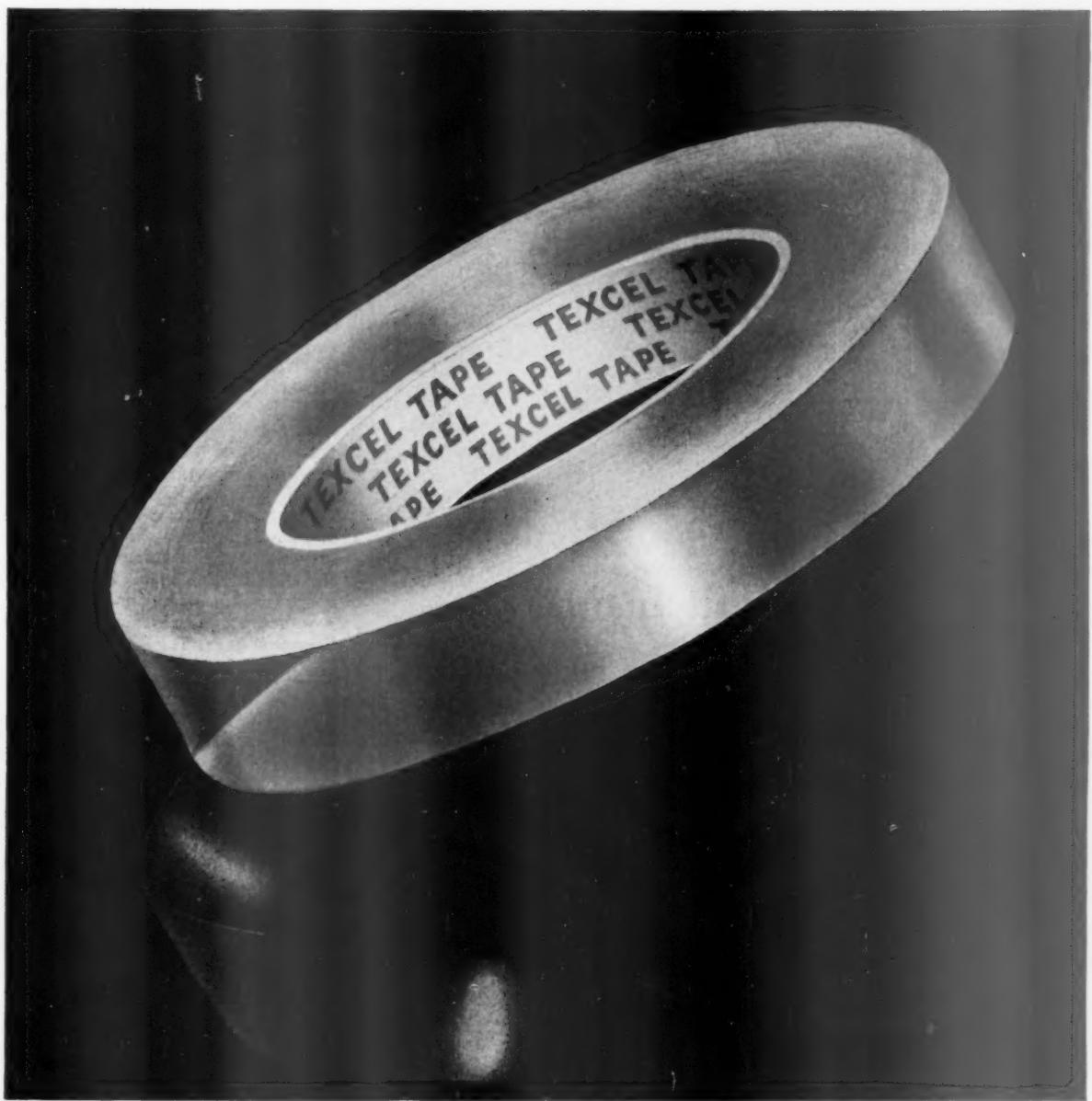
• **Processing**—In effect, what the Navy wanted was equipment that would take in unprocessed copy, that would turn out finished copy without using a "wet" developer or extensive processing. The machine was to deliver copy that could be directly reproduced on standard offset-type equipment. Earlier machines that possessed the required speed could handle only copy that had been photographed, and they delivered copy on photographic film, which had to be enlarged and printed. That meant a lot of expensive equipment, skilled personnel, darkroom facilities, and storage space.

The new equipment seems to fill the whole bill. Its facsimile signal can be transmitted readily over coaxial cable, or by radio relay for longer distances.

The setup includes a sending and a receiving unit. Pages 8½ x 11 in. can be



Structural Corrugated Glass forms daylighting partitions in Macy Beauty Salon, Richard D. Belcher, Chief Architect (A.I.A) R. H. Macy Company.



Stick with Blue Tab



TEXCEL[®]
CELOPHANE TAPE

PERMACEL TAPE CORPORATION...NEW BRUNSWICK, NEW JERSEY

The prime purpose of American Credit Insurance is to guarantee the value of Working Capital invested in Accounts Receivable.

There are twelve major contributions that American Credit Insurance coverage makes to maximum sales efficiency and sound financial management.

OUR booklet gives essential facts about these important benefits quickly and simply. May we mail you a copy? Phone our office in your city or write AMERICAN CREDIT INDEMNITY COMPANY of NEW YORK, First National Bank Building, Baltimore 2, Md. Just say, "Mail me book offered in *Business Week*."



Credit Insurance is a Credit Tool... It is never a Substitute for a Credit Department

American Credit Insurance



sent at a rate of 10 per min. Here's how it works:

Copy is fed into a vacuum transport system, which carries it under a flying-spot scanner (FSS) cathode ray tube. A photo multiplier picks up the light reflected from the copy; the resulting video signal is amplified and used to modulate a carrier signal that is transmitted by wire or radio.

At the receiver end, a video amplifier separates the synchronizing pulses. These pulses control the scanning rate of a cathode ray tube. The image caused by the patterns is focused on a sensitized xerographic drum, where the variations of the light's intensity cause variations in the surface electrical charge of the drum. When an electrostatically-charged dye developer is dusted on the drum, the dust sticks to the drum proportionally to the intensity of the charge. Then the drum is brought into contact with paper. The dye powder sticks to the paper and is later sealed on by infrared heat. The end result is a sharp black-on-white image of the original document.

• Source: Haloid Co., 2-20 Haloid St., Rochester 3, N. Y.

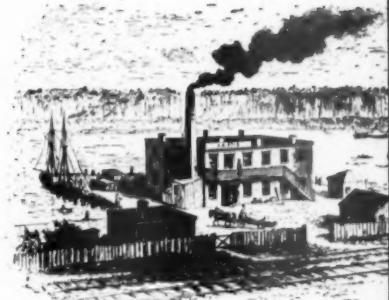


Stepped-up Teleprinting

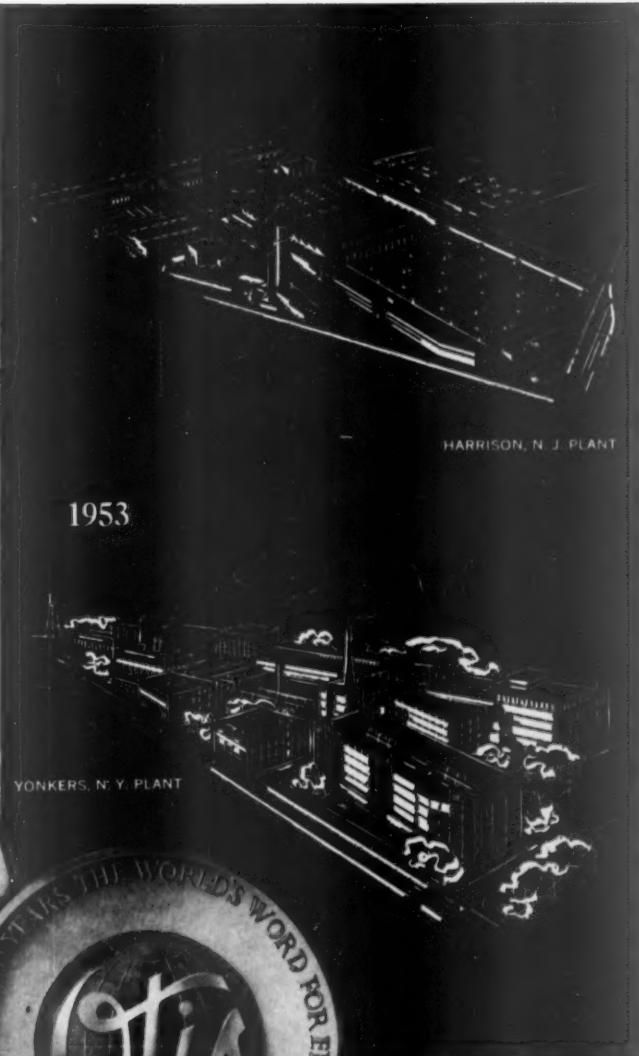
A lightweight, rugged teleprinter designed to send and receive messages at 100 words per minute is on the market from Kleinschmidt, Inc. It's a streamlined version of a portable machine developed by Kleinschmidt for Signal Corps operations in the field.

It weighs 45 lb., can hit a top speed of 150 words a minute. Present printers weigh about 110 lb., have a top rate of 60 wpm.

Controlled by a keyboard similar to that on a standard typewriter, teleprinters are most widely used by news wire services and the telegraph industry. Systems are also in operation among railroads, airlines, the petroleum and



First elevator shop, Yonkers, N. Y. 1853



1953



OTIS SETS A GOAL for a second century of progress

100th Anniversary statement to the employees and stockholders of the Otis Elevator Company by the President, LeRoy A. Petersen.

The year 1953 is for Otis both an end and a beginning. It is the end of a century during which the name, Otis, became synonymous with the word, elevator; it is the begin-

ning of a second century of continued Otis leadership and development in the field of vertical transportation.

During the past hundred years, the men and women of Otis have, by hard work, trial and error, and occasional flashes of genius, built a company and a product of which we today have just reason to be proud and, in the doing, they have contributed greatly to the building of their country.

(continued on next page)

(Advertisement)

the Otis heritage

During this first century, there evolved an Otis organization whose character reflects the composite character, judgment and ideals of those leaders of the past who, generation after generation, selected and trained and inspired this organization. It is an organization whose roots go deep into the past, and which has a tradition of loyalty to the Company not easily understood by those who are not a part of it.

Similarly, the organization of the future will, to a considerable degree, reflect the judgment, character and ideals of those who now have a voice in the selection and training of those who will follow us. Clearly, it is our obligation to pass on to our successors an organization no less qualified for their task than the organization which we inherited and with which we have had the privilege of working.

During the past century, Otis established and maintained a reputation for designing, manufacturing and installing the best elevators available. At the same time, we

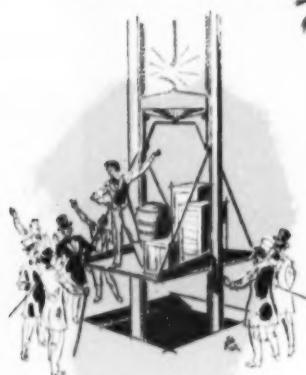
built a reputation for trustworthy performance and fair dealing, which resulted in our becoming not only the world's largest producer of elevators but also a producer whose product commands a premium price.

That this position is not the result of chance, but rather is the result of a deliberate policy and of a conscious goal, is evident from the objectives outlined by Charles Otis in 1877:

"It should be our aim", he said, "to make our work satisfactory to our customers, not alone until we get our pay for each particular job, but until we get paid for every job we ever intend or expect to do for anyone, to the end of time; to get every customer we can and to keep every one we get — both for his work and for his influence."

"We must keep in mind", he said, "that the great objects of doing business are (1) to give occupation, (2) to achieve success, and (3) to make money, and that we shall not accomplish very much of the first two of these objects if we fail in the last."

SOME OTIS "Firsts" OF THE FIRST HUNDRED YEARS



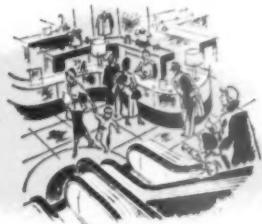
1853—Elisha Graves Otis invented the first safe elevator. It was equipped with a safety device to prevent the elevator from falling if the ropes should break, which was a frequent occurrence in those days. Until a safe elevator became available, buildings and cities had grown vertically only as high as people were willing to climb stairs.

1878—The first high speed hydraulic elevator, introduced by Otis Brothers and Company made the first "skyscrapers" economically possible. These elevators were capable of higher speeds than the then existing methods of control made it practicable to use, and car speed was, therefore, limited to 200 feet per minute.

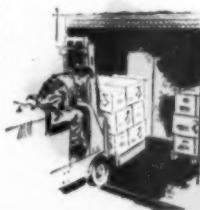
1889—The first Otis electric drum elevator was installed in New York City. The application of electricity to elevators made possible many new types of control, and the use of electric door interlocks added greatly to elevator safety.

1892—The first elevator to be controlled by variable voltage supplied by a separate motor generator was installed by Otis Brothers and Company in New York City under license from Ward Leonard. This type of control, which is now used on all high speed Otis elevators, provides smooth and rapid acceleration and retardation and contributes immeasurably to the quality of operation.

1900—The first Escalator was exhibited by Otis Elevator Company at the Paris Exposition and was awarded a grand prize. Until 1950 the word "Escalator" remained an Otis trademarked name, but is now in common use as a part of the English language.



1903—The first electric gearless traction machine was developed and installed by Otis. Gearless traction machines can be used for any desirable speed and rise and are extremely durable. To our knowledge, no Otis gearless machine has ever worn out.



1915—The first self leveling, or Micro-Drive, elevators were developed by Otis engineers and enable passenger and freight elevators to be brought to an accurate stop at floor landings and to maintain this level automatically. This development saves time, eliminates the stumbling hazard and permits trucks to run smoothly on and off an elevator platform.



1953—The first traffic duplicating equipment was designed by Otis engineers to facilitate research and to demonstrate elevator performance. This electronic device is used to impose upon a group of model elevators in any desirable order all of the traffic conditions that, under any circumstances, could be created by the passengers in an intensive service office building. It then demonstrates by actual performance how such traffic is handled by Otis Autotronic—Without Attendant—Elevators with a fully automatic electronic group supervisory system.

This ingenious electronic device is effective, not only in demonstrating the performance of existing equipment, but, by providing Otis engineers with a laboratory which furnishes a prompt and accurate reading on the utility of new developments under actual operating conditions, it gives added assurance that the Otis leadership which has been so outstanding in the past will be continued in the years to come.



1950—The first group supervised intensive service elevators, designed to operate without attendants in the cars and equipped with electronically protected car and hatchway doors, were installed by Otis Elevator Company in the Atlantic Refining Company Building in Dallas, Texas. Such Autotronic—Without Attendant—Elevators have demonstrated their ability to render excellent service and to save up to \$7,000 in operating costs per elevator per year.

1948—The first automatic and electronic supervisory system (Autotronic®) was developed by Otis to secure maximum quantity and quality of performance from a group of intensive service elevators and to vary the plan of operation to suit the changing requirements of the traffic.



At this time, also, the Otis Electronic Touch Button was made available which, of the lightest touch of a fingertip, is brightly illuminated and simply and dependably stops the elevator automatically at the desired floor.



1925—The first full Collective Control elevators were developed by Otis, primarily for use in apartment houses and hospitals. These elevators are passenger operated but furnish service substantially equivalent to that secured with an attendant operated elevator.

1924—The first Signal Control elevators, developed and installed by Otis, enable elevators to operate with speeds in excess of 700 feet per minute and to stop accurately and automatically in response to the pressure of hall or car buttons.

our goal for the future

At the beginning of our second century of operation under the name of Otis, it is appropriate to consider what we now regard as our purpose and objective and what we now believe to be the justification for our continued existence.

Without attempting to be epigrammatical, it seems to me that our objective should be:

To build the best products in our field; to continually improve these products in design and in method of production and installation so that they can continue to be sold at a profit sufficient to

(a) permit payment to investors of a return on their investment which will furnish an adequate incentive to save and invest in this or other useful competitive enterprises,

(b) permit stable employment of a carefully selected and trained organization,

(c) make possible such wages, salaries and working conditions as will result in the maximum incentive and capacity for production for the ultimate good of the greatest number.

This objective is based on the belief that the greatest good for the greatest number can result only from maximum production of useful goods equitably distributed. It is also based on the belief that maximum production is obtainable only through competitive enterprise, with such incentives as are necessary to prompt capital to provide the required tools and to stimulate all types of labor to the greatest possible productive effort consistent with their spiritual and physical well being.

It will be noted that, in common with Mr. Charles Otis, it is recognized that, first and foremost, the purpose of a business must be to satisfy its customers to the end that they will continue to buy the product at a profitable price. Failing in this, all other objectives must be abandoned—including the fundamental objective of continued operation.

Obviously—a successful business must provide for its own future existence, if it is to accomplish anything else. However, mere existence is the *minimum* requirement. The real justification for a company's survival must be measured by the contribution which it makes to the general welfare.

In common also with Mr. Otis, we recognize the importance of providing employment—but only when employment results in, or contributes to, useful production or gratification of human needs. Employment which merely wastes time is a criminal waste of human lives and human energy and is grossly inconsistent with the objectives of a legitimate business.

our personal obligation

The ideal for which we should strive is a company which provides every person in its organization with frequent opportunity to test his maximum capacity and which provides a constant incentive to increase that capacity and to devote it to useful ends.

(continued on next page)

There is so much in this world that requires doing and the doing of it requires so much human energy and intelligence that we cannot tolerate that which wastes this energy and intelligence and which stultifies the ambition which is necessary to make it do useful work. We must measure our own individual success not primarily by the position we attain but by the extent to which we are utilizing to the utmost the talents and capacity with which we are individually endowed and also by the extent to which we make it possible for others to do the same thing.

the role of competitive enterprise

The United States has reached a position of world leadership primarily, I believe, because, throughout the greater part of its history, emphasis has been laid upon the importance of the individual and upon the importance of maintaining individual opportunity and powerful incentives for individual effort and accomplishment. The resulting competitive enterprise has produced a standard of living and a capacity for production the like of which the world has never seen.

Nevertheless, there has arisen a contrary philosophy, backed by the ruthless power of a foreign dictator state, and the American system of living and producing is on trial before the world.

the challenge to American business

Now, at long last, the American people have once more called upon American business men to restore the faith of the country in the basic principles upon which our nation

was established and to stage such a demonstration of the advantages of democratic competitive enterprise that the fallacy and folly of socialism and communism will be self evident to all the people of the world who are free to learn—and, ultimately, even to those behind the iron curtain.

It is a crisis greater than any previously faced by the American people and a challenge to the business men of the country which they must accept or fail miserably in the defense of the principles in which they have professed a profound belief.

our share of the job

As a part of the business world, we share in the obligation to demonstrate the superiority of our system of democratic competitive enterprise in providing for the general welfare.

Our share in this demonstration is to so work and so manage the affairs of our Company as to help raise the level of accomplishment of the business community. Then confidently, aggressively, persistently and intelligently we must acquaint, first of all the people of our own country and then the other people of the world, with what business is, has done and can do and the vital part which business has played and must continue to play in building up and maintaining the standard of living, way of life and defense of our country.

The Otis Elevator Company is to thousands of employees, stockholders and customers a representative of business and an example of the operation of the competitive enterprise system. It should be our purpose to make that example a good one.



President

OTIS HAS PLANTS ALL OVER THE WORLD

UNITED STATES—Yonkers, N. Y. • Harrison, N. J.

CANADA
Hamilton

MEXICO
Mexico City

ENGLAND
London

JAPAN
Tokyo

FRANCE
Bezons

ARGENTINA
Buenos Aires

ITALY
Milan
Naples

BRAZIL
Rio de Janeiro
Sao Paulo

GERMANY
Berlin-Borsigwalde

URUGUAY
Montevideo

AUSTRALIA
Sydney

UNION OF SOUTH AFRICA
Wadeville



OTIS ELEVATOR COMPANY

Offices in principal cities all over the world

executive offices:
260 11th AVENUE,
NEW YORK 1, N. Y.

mining industries. Kleinschmidt hopes to expand it further in inter-office and intra-office work, by offering to "tailor-make" the system for individual commercial needs.

• Source: Kleinschmidt, Inc., Deerfield, Ill.

NEW PRODUCTS BRIEFS

Surfindicator is a new precision instrument designed to measure the surface roughness of any material quickly and easily. It measures deviations from a mean surface ranging from 1 to 1,000 microinches. It's manufactured and distributed, under an exclusive license from General Motors Corp., by Brush Electronics Co., 3405 Perkins Ave., Cleveland. Price is \$685.

A new Vidicon tube, weighing only 2 oz. yet possessing three times the sensitivity of the iconoscope tube, will make possible more compact, lower-cost TV film cameras and associated equipment for broadcast film pickup. Developed by RCA Victor Division of Radio Corp. of America, this new electronic seeing eye is an outgrowth of the original Vidicon tube developed by RCA for closed-circuit industrial TV.

Furniture rests specifically designed for metal tubular furniture to protect resilient floors from dents and scratches have been announced by Armstrong Cork Co. The new products, which supplement the company's wide line of furniture rests, fit 1-in. and 1-in. diameter legs.

Polyethylene shrouds are now protecting bananas from unsightly scars, abrasions, and bruises on their way from Latin American plantations to market. United Fruit Co. is using the transparent plastic film and has found that it keeps temperatures constant around the fruit, simplifies inspection en route.

A postage meter, not much larger than a dial telephone, is being introduced by Pitney-Bowes, Inc., Stamford, Conn. You dial the postage value wanted, press a lever, and the machine prints and records postage used. A moistening mechanism permits sealing of envelopes, and a detachable unit takes care of parcel post metering.

Ripplewood is a highly grained wall paneling just announced by Georgia-Pacific Plywood Co., Olympia, Wash. The new product has been specially processed to accentuate the swirling grain for decorative purposes. The company says it makes possible a wide variety of two-tone effects when given two coats of stain or paint.



TV spot news — by Raytheon Microwave

Because of Raytheon's microwave equipment, America's TV audience gets a ringside seat at important news events. Used to televise the Yucca Flat atomic explosion, Raytheon's Magnalink*— world's most powerful — beamed picture and sound to the TV station over 100 miles away. A compact, portable version is easily carried to a football game or fire.

Raytheon microwave units also provide connection with network TV and multi-hop relays over long distances. Picture and sound travel together. Another highlight in Raytheon's 25 years of "Excellence in Electronics."



RAYTHEON MANUFACTURING COMPANY, WALTHAM 54, MASSACHUSETTS



RAYTHEON TELEVISION SETS feature new VU-matic* Control for all-channel VHF-UHF tuning. Raytheon TV — "Built for Today—Designed for Tomorrow." See it!

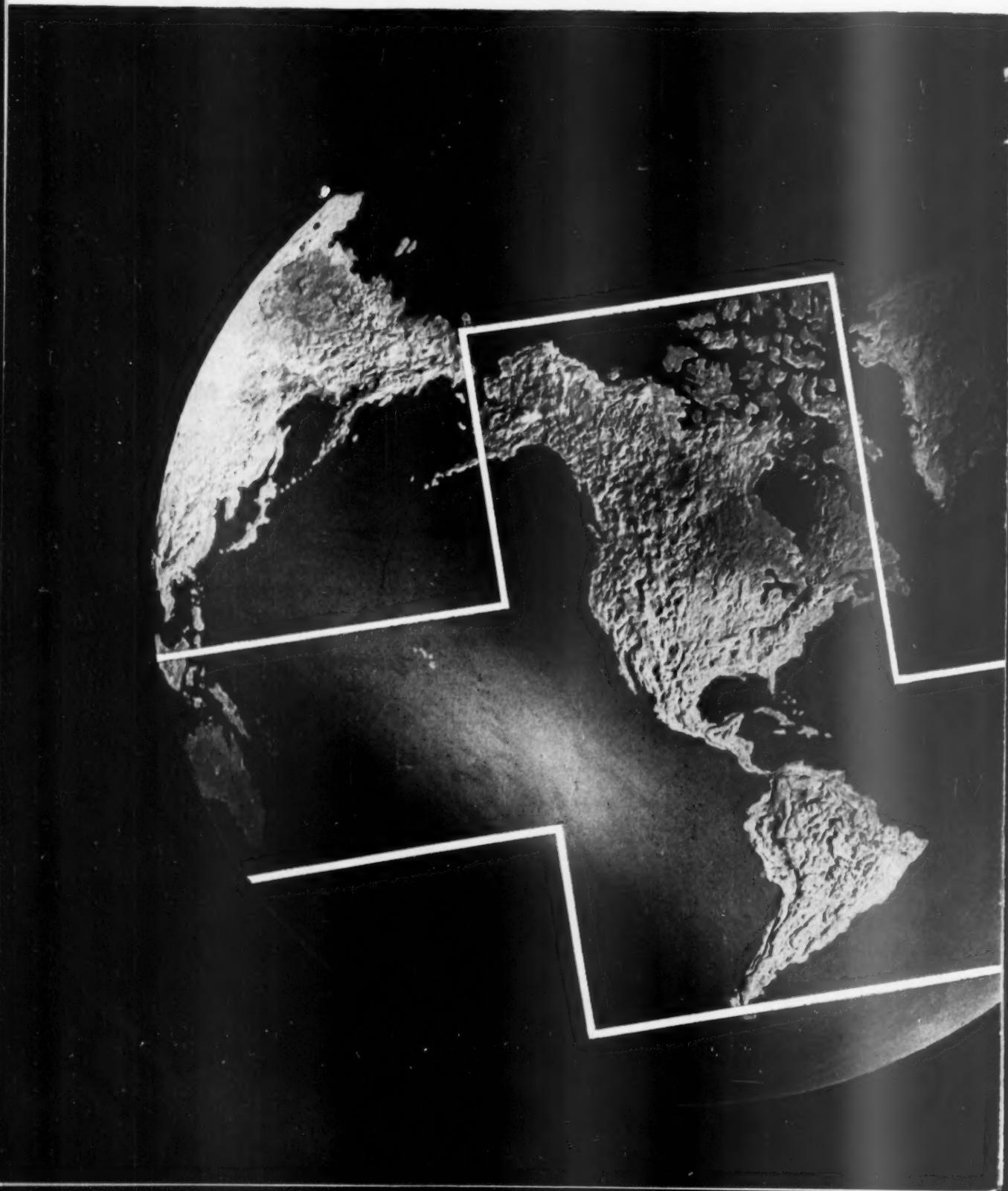


HEALING BY RADAR—Raytheon Microtherm* diathermy, used by leading hospitals and physicians, employs radar magnetron tube. Avoids radio and TV interference.



BUSINESS WEEK REPORTS

THE WORLD IN 25 YEARS: How the



U.S. Economy Will Reach Around It



American business will have to look overseas as it has never done before



Main market: the Western Hemisphere — plus Australia, Africa and the Middle East



Needed: as sharp an eye on its 650-million customers abroad as on the 200-million at home



Purchases abroad: nearly \$20-billion of raw materials.



Investments abroad: over \$5-billion each year.



Jobs: One college graduate in four will find his in Rio de Janeiro, Dakar, Beirut.



Vacations: on North Africa's Riviera or Australia's Great Barrier Reef

In 25 years, American business will take the Western Hemisphere, the Middle East, Africa, and Australia as its prime market.

In this broad sweep of the earth's surface will live upward of 850-million people—200-million in the U.S. itself and 650-million outside it. These hundreds of millions will be in various stages of economic and social development, but they will share a common market.

From this area, economists expect, we'll be getting most of our raw materials; to it, we'll be sending a big share of our manufactures, our capital, and our know-how. By 1975, volume of trade between the U.S. and the rest of this area may reach \$50-billion a year—it's now around \$15-billion.

• Shift of Emphasis—Meanwhile, our older markets in Europe will correspondingly diminish in importance. They don't have the same potential for gain as the areas now underdeveloped.

Economists don't foresee a drop in the volume of trade with Europe. They do see a phenomenal rise in trade with the rest of the world. They see the U.S. freshly oriented to international affairs: political, industrial, social.

• Immediate Effects—The summary above points out some of the immediate effects such a reorientation of the U.S. economy would have in 1975. It conjures up pictures of Americans doing business and having fun on a worldwide scale. Of tourists pausing for a weekend in Istanbul or stopping overnight in Madagascar—not occasionally



Special Report

but as part of a routine way of life.

Everywhere within this trading area francs and pounds and cruzeiros and a variety of other currencies would be freely convertible into dollars, and vice versa.

Commercial geography will at the same time be rewritten. Every businessman and every schoolboy will be acquainted with exotic new names. We'll talk knowingly of copper from Entebbe, and Mufulira, of manganese from Amapa and Accra, of zinc from Perth and Bilbao and Monterrey, of tungsten from O'kiel and Oruro. Just as we are already getting used to the idea of oil from Kuwait and Maracaibo.

If the U.S. economy continues generally to expand, all this is in the cards. The changes and adjustments will affect the lives of all Americans. In this special report, BUSINESS WEEK takes a look at the U.S. economy of 1975 and tries to see what is likely to happen by then, and why.

I. America in 1975

The biggest change in our economy 20-odd years from now will probably appear in the import picture. That will have the most noticeable effect on our display rooms and store counters.

The U.S. is already the world's biggest importer, but economists say our rate of imports in 1975 will dwarf our present outlay. Where one ship may be in New York harbor today unloading vegetable oils from Africa, in 1975 there'll be half a dozen, or a dozen, ships with similar cargoes. For every oil tanker now bringing petroleum to New Orleans there'll be several in 1975.

• **Fruit to Nuts**—Most of the imports in 1975 will be raw materials that industry needs: minerals, oil, fibers. But there will also be a huge increase in food imports, both the staples such as coffee, cocoa, and sugar and the luxury items such as tropical fruits and nuts, cheeses, wines, frozen meats, and fish.

Demand for the staples is determined by total population, rather than by degrees of prosperity—and imports will have to soar to keep up with our population growth. Demand for the luxury dainties is keyed with the pocketbook—and Americans have shown a continuing readiness to spend freely for luxury items.

Of course, you can already buy foreign foods in many stores and in many cities. But what 1975 will bring is foreign foods in every store, in every part of the country. The housewife who wants to impress her husband's boss will need only a trip to the neighborhood supermarket to get the makings of a dinner of French pressed duck or Scotch quail.



The fresh approach starts here!



Take it easy—

GO PULLMAN
COMFORTABLE, CONVENIENT AND SAFE

COPYRIGHT 1953, THE PULLMAN COMPANY

Enjoy the Rail-Auto Travel Plan.
Your Ticket Agent will gladly
make arrangements.

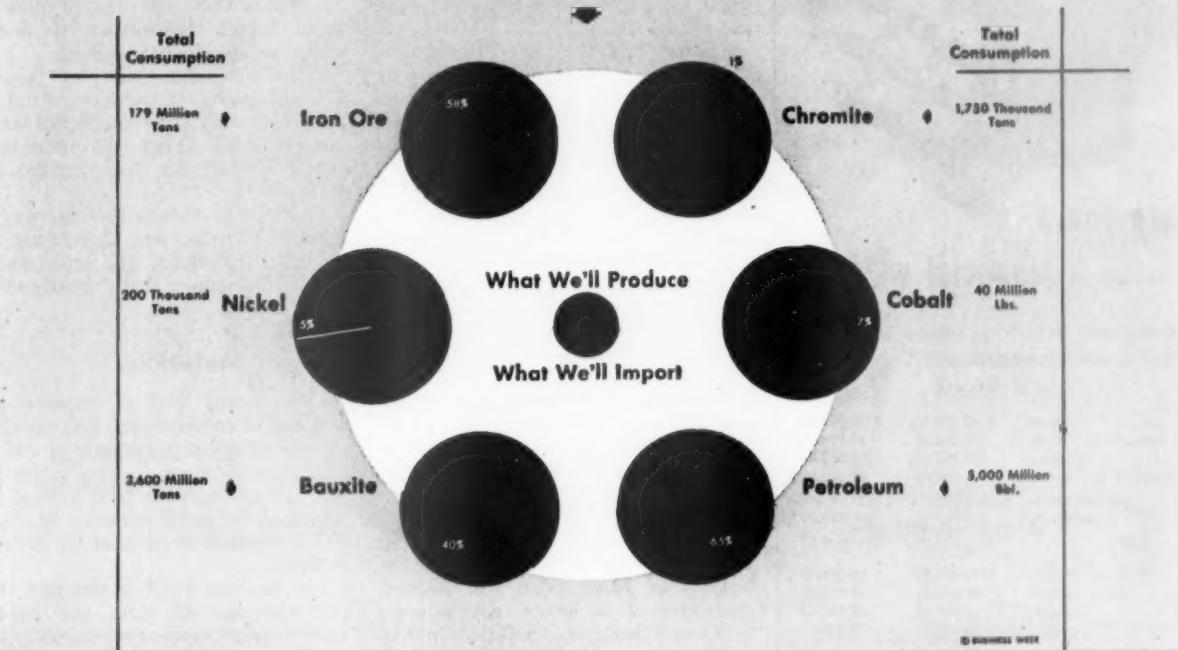




The American Appetite: It Gobbles Up More Than We Can Produce

Population	1950	1960	1970
National Income	\$240 Billion	\$290 Billion	\$480 Billion

By 1975 Paley Commission Expects Consumption of Raw Materials to Look Like This



BUSINESS WEEK

• **And Manufactures**—The U.S. market for foreign luxury manufactures is sure to expand, too. You'll see a wider variety of European handcrafted goods in the department stores: toys, furniture, luggage. Dry-goods stores will carry top-grade British woolens and French silks—as a standard item, not an exception. Paris dresses will pop up in specialty stores all over the U.S.

On the highway you'll get used to seeing a great many more European cars: handmade limousines like the Mercedes-Benz; sleek sports cars like the Jaguar; utilitarian cars like the Volkswagen. College boys who once rattled around in Model As and now tool along in hotrods will be spinning around the campuses in British MGs, French Simcas, and Italian Siatas.

• **Men Wanted**—To dig out the raw materials we need and to launch the industrialization that will make underdeveloped nations good customers for our own wares, we'll need to get into overseas activities on a scale never known before. Huge new dollar investments will be made abroad; increasing numbers of U.S. citizens will be working and playing in all corners of the world.

American corporations will lure college graduates with offers for overseas jobs, especially business administrators,

economists, power experts, mining engineers, metallurgists, mechanical engineers, chemists, salesmen.

For these jobs, a working knowledge of Spanish or French will be helpful. But the demand will be so great that many with otherwise satisfactory qualifications will be signed up regardless of shortcomings in language skills.

• **Living Conditions**—This group of managers and technicians will be concentrated most heavily in South America, the Near East, and Africa—the areas most lacking in industrial know-how. One thing they can count on: Whether they live in cities or in wilderness, they'll bring their standard of living along with them. Even in out-of-the-way spots in Rhodesia and the Gold Coast, their employers will provide them with paved streets, good stores, and gadgeted homes.

Around cities like Caracas and Rio de Janeiro, the colonies of permanent workers for U.S. companies will take on the aspect of typical suburban developments in the New York, Chicago, or Washington style. Here, transplanted workers will be able to enjoy the same kind of social life that they knew back home.

This overseas development of industries and housing by American companies will send thousands of construc-

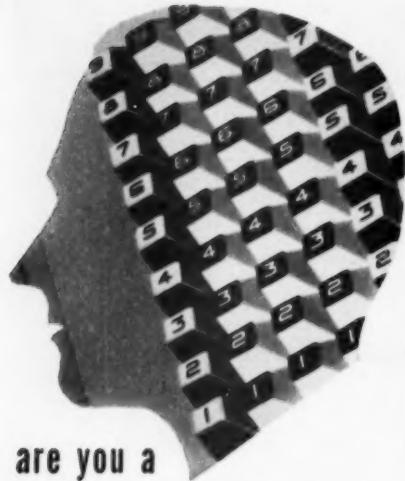
tion workers, engineers, and architects to foreign soil. Meanwhile, the government will be sending experts in such fields as health, education, and agriculture.

• **Selling Abroad**—The U.S. won't only be buying more goods abroad—it will be selling a lot more, too. Foreign countries will continue to demand our farm surpluses, such as wheat and corn. As their standard of living rises, they will buy more of our consumer hard goods, everything from automobiles to electric ranges.

Finally, as industrialization advances in country after country, the nations will manufacture some of these new necessities for themselves. Then our biggest sales—by far—will be in capital goods: machine tools, farm machinery, power plants, trucks.

• **Give and Take**—As business focuses increasingly on sales abroad, new elements will come into U.S. corporate life.

Many companies will need an export manager in top management. Foreign sales staffs will get tender attention; direct outlets will be opened up in the choicest foreign markets. Foreigners will be added to sales forces, annual sales conventions will be as likely to be held in a foreign city as in the U.S., and promising foreign recruits will be



**are you a
financial wizard?**

Compare: Which company is in the best financial condition?

	Company A	Company B
Cash	\$ 40,000.00	\$ 40,000.00
Accounts Receivable	225,000.00	22,500.00
Inventory	200,000.00	200,000.00
Other Current Assets	35,000.00	35,000.00
Current Assets	\$500,000.00	\$297,500.00
Fixed Assets	150,000.00	150,000.00
	\$650,000.00	\$447,500.00
Accounts Payable	\$170,000.00	\$ 50,000.00
Notes Payable	100,000.00	50,000.00
Accruals	15,000.00	15,000.00
Taxes	65,000.00	32,500.00
Current Liabilities	\$350,000.00	\$147,500.00
Net Worth	300,000.00	300,000.00
Total Liabilities	\$650,000.00	\$447,500.00
Current Ratio	1.43 to 1	2.02 to 1
Working Capital	\$150,000.00	\$150,000.00
Debt	\$350,000.00*	\$147,500.00†

*(No reduction in sight of possible delinquent payables or Federal taxes etc.)

†(Payables current, in re-duction short-term obliga-tions, etc.)

The point is that while both companies are identical in every respect, Company B has converted its accounts receivable into operating capital through the use of a Heller commercial financing program.

TO LEARN THE FACTS about Heller commercial financing, write for a free copy of our brochure *Operating Dollars for Every Business*. You are also invited to consult us, by letter or in person, about specific financial problems. There's no obligation.

Walter E. Heller & Company



Bankers Building
105 N. Adams Street
Chicago 90, Illinois

10 East 40th Street
New York, N. Y.

Special Report

brought back to the home office for special training.

In fact, there will be thousands of young foreigners visiting U.S. industrial plants and offices at any given time. They'll be sent here, by companies or by their own governments, for tutoring in sales, administration, or engineering.

• **Tourists' World**—With so much more travel back and forth than we have now, transportation improvements will shrink the world. Americans will find it quick and easy not only to see their own country but also to spend vacations abroad. Tourist agencies will clear most of the problems; for most tourist resorts you won't even need a passport.

Economists will even predict just how big this worldwide movement will get by 1975. By that time, they say, one out of every three Americans will have spent at least one vacation outside the U.S.

• **New Rivieras**—With increased leisure time (BW—Sep. 12 '53, p142), Americans will take longer vacations and more of them. It won't take them any longer to go farther than they do now. People who now trek to Florida or maybe the West Indies will follow the sun all the way for midsummer lolling on the beaches of Montevideo and Sydney. And some of the people who now go to Europe will range more widely to Turkey, India, the East Indies.

A fashionable place to spend Christmas holidays may be the North African Riviera, only six or seven hours' flying time from New York. If you have a few extra days, you could also take in the Holy Land.

These vacationers in new resort areas won't have to rough it. They'll find the American standard of accommodations in every resort—in fact, most of the big hotels in the newer developments will be built and operated by familiar U.S. hotel chains.

Of course, travelers can go native if they choose, but they'll find more Fords than camels in Egypt. And it's a safe bet that most natives on the tourist route will speak good Americanese.

• **How Do We Know?**—All these changes are forecast as the logical extension of trends that already appear in our economy and the world's economy. The year 1975 is taken as a milestone when (1) these trends will have had time to crystallize, and (2) most people alive today will still be living—which rules out what more remote generations may do.

But what about war? The economists answer that nothing short of all-out atomic or thermonuclear war will materially alter the long-term trends. War sometimes impedes the course of these trends, the economists admit, but it

more frequently accelerates them, in the long run.

For the long-range pressure to reshape the U.S. and world economy, the experts point to three main factors:

- The U.S. will increasingly need raw materials from abroad.
- The U.S. will need to make far more foreign investments to find a profitable use for its capital.
- Other nations will push their industrialization in order to attain greater self-sufficiency and better standards of living. That will make them better markets for U.S. capital and U.S. goods.

Economists believe the interplay of these factors—the one stimulating the other—will accelerate the expansion of the U.S. economy that's already recognizable.

II. Raw Materials

Our present level of imports, particularly of commodities, falls far short of indicating the magnitude of our future needs. America's appetite for foreign raw materials has been defined and measured by the President's Materials Policy Committee, headed by William S. Paley.

On the one hand is the fact that, over the past 20 years, our imports have dropped from an average of nearly 10% of our national income to less than 5%. Moreover, imports may drop even lower in the next few years as strategic stockpiling tails off.

On the other hand is the Paley committee's conclusion that the more we expand, the more dependent we will be on the rest of the world. We're now spending about \$8-billion a year to import minerals and foodstuffs. By 1960, this figure should be raised to \$12-billion, in today's dollars. And by 1975 it will probably be close to \$20-billion.

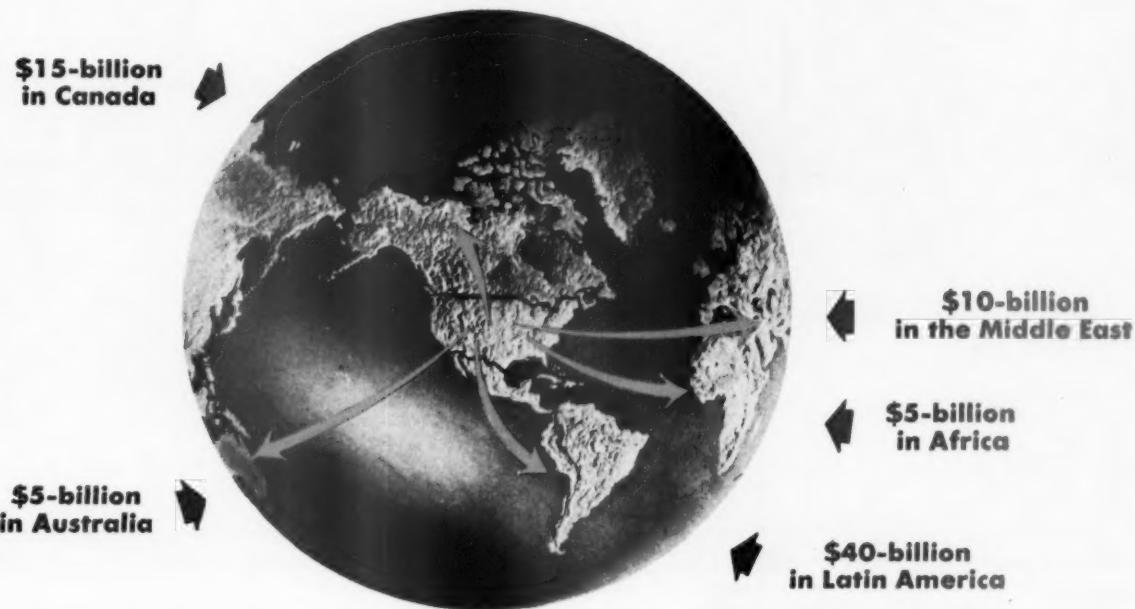
• **Domestic Output**—This huge increase doesn't necessarily mean a decline in domestic production of raw materials, though some domestic output is on the way down. Chiefly, it means that demand will increase far beyond the ability of domestic producers to supply.

Take petroleum as an example. In 1975, we will probably be pumping more oil out of U.S. fields than at present; we'll also be producing "synthetic" gasoline from shale on a commercial basis. But we still won't be able to meet demand.

Demand for petroleum products first outstripped production in 1945, and the gap has been widening ever since. In one year alone, from 1950 to 1951, domestic demand rose by 500-million bbl. Of course, that period included the onset of the Korean war, but demand shows no sign of sagging back to



By 1975, investment abroad will add up to something like this:



American capital will be risked on new opportunities overseas . . .

1950 levels. The Paley committee suggests we may need to import more than five times as much oil in 1975 as we do now.

• **Depletion**—Iron ore is a good example of a raw material whose domestic output is on the way down. The richest ore beds are within sight of depletion; the fabulous Mesabi Range will soon be principally yielding taconite.

By 1975, domestic output of iron ore may drop from the present 120-million tons or more to less than 100-million tons a year. Our imports may have to be multiplied by 10, in order to keep up with increasing demand. As the cost of extracting our own ores goes up, in man-hours and capital equipment, the price advantage will swing more and more to ore from Labrador and Venezuela.

This trend toward higher real costs shows up, too, in other resources: copper, zinc, lumber. The U.S. has already switched from being a net exporter of these commodities to being a net importer. It's partly because consumption is outrunning domestic production, but partly because costs make us turn to cheaper sources abroad.

• **No Have-not**—This doesn't mean

the U.S. is overnight becoming a have-not nation. We still possess priceless supplies of many resources essential to industrial primacy. But it does mean we need access to foreign supplies to keep up our economic growth.

No nation in the world today is both highly industrialized and completely self-sufficient. The U.S. comes closest to this condition. But the same technological superiority that makes it industrially great also makes it more dependent on foreign resources. Example: The advent of the atom and the jet has created a demand for many hitherto obscure minerals, such as titanium and columbium—minerals we don't have in sufficient supply within our borders.

Conversely, of course, technology has lessened the demand for some imported commodities. Commercial production of synthetic rubber, for instance, has stopped imports of natural rubber at about where they were in 1940—while total consumption has doubled. And the development of nylon has all but stopped our imports of silk.

• **Prognosis**—There's no way of telling which raw materials will be outmoded by 1975 and which will be in vastly increased demand. On balance, though,

there's little doubt that if we need much more raw material than we do now, it will have to come from abroad.

III. Money for Hire

The trend toward greater dependence on foreign sources of materials is matched by another long-term economic trend: the increasing need to find investment opportunities abroad.

Right now, there's not much scope for large-scale investment abroad. Either the underdeveloped countries aren't yet ready to absorb investment from the U.S. or they lack the stability to encourage investors. For example:

• Peru and Indonesia need extensive transport systems and power development before their wealth of resources can be tapped effectively. Afghanistan, with 10-million population, has no railroads, no navigable rivers; Iran, four times the size of France, has 900 mi. of railroad to 26,000 mi. for France.

• Bolivia and Iran are poor political risks because of their intense nationalism at the moment.

• Argentina and Brazil have also gone nationalistic, with restrictions that



The Day the Cake Fell!

Suppose all the nuts, bolts and screws were suddenly removed from a sparkling new range. A great deal more than a cake would fall.

Yes, fasteners are important—and worth the time and care in selecting those that are "just right" for your product. Lamson & Sessions is supplying most of the appliance manufacturers with bolts, nuts and screws—each type engineered to meet individual requirements.

Regardless of the product you manufacture, it will pay to take a critical look at the fasteners you are now using and ask yourself these questions:

Can I save money by replacing a "special" with a "standard"? Or will the use of a "special" simplify production, thereby saving time and perhaps materials?

Whatever your problems, check with Lamson & Sessions—one of the few manufacturers offering a complete line of fasteners teamed with expert engineering service.

THE LAMSON & SESSIONS CO.
1979 W. 85 St., Cleveland 2, Ohio.
Cleveland & Kent, O. • Birmingham • Chicago



The home of "Quality Controlled" fasteners



Special Report

keep out foreign participation, foreign investment, in development of their resources.

- **Gilt-edged Preferred**—During the whole postwar period, American investors have virtually ignored overseas developments because there were far more lucrative—and far safer—outlets at home for their funds.

In the last seven years, they have invested only \$13.5-billion abroad, compared with \$299-billion in the U.S. The bulk of the \$13.5-billion went to safe and sound Canada, the more stable republics of South America, and the oil-rich Middle East. Most of the money came from corporations, rather than from private investors at large.

Commerce Dept. reports that 2,300 U.S. companies and individuals held controlling interests in 7,500 foreign enterprises at the end of 1950. Investment of Americans up to that time amounted to \$12-billion; assets of the 7,500 companies totaled \$22.2-billion. Most of the 226 separate U.S. investments that exceeded \$10-million each were in oil ventures, though the greatest total assets of foreign companies were in manufacturing.

From now on our foreign investments are likely to increase, for two reasons:

- We won't be able to get the foreign raw materials we need without helping to finance their development. Oil companies already provide the bulk of our overseas investments; other extractive industries will follow.

- We won't be able to put our savings to work in the future without going abroad. Funds available for investment will be more than our own industry can absorb.

- **Special Study**—America's future investment needs have been studied by Colin Grant Clark, an Australian economist who wrote a book in 1942 entitled *The Economics of 1960*.

As Clark sees it in an updating of his book, U.S. industrial capacity will continue to grow, but at a slower pace than in the Korea buildup. Clark estimates our future domestic investment requirements at about 6% of our net national income, while the probable rate of savings will be nearer 15%.

This means at least 8% of our national income could be available for investment outside our borders. More conservative economists predict a rate of saving more like 12%, with about 3% available for foreign investment. But even this rate, if national income doubles by 1975 as predicted by the Paley committee, would mean investors might have an excess of \$15-billion a year.

Clark declares that our economy would have to stop expanding if in-

vestors proved unwilling to risk their capital abroad. Then, foreign buyers wouldn't be able to buy our goods; we would suffer from overproduction and unemployment. A government pump-priming on an unprecedented scale might stave off a decline for a time, says Clark, but it would likely be a deathblow to free enterprise.

- **New Policy**—Before large-scale private investment can take place overseas, economists think the U.S. government will have to make some tax concessions to both corporations and individuals. It will also have to provide more loans and technical assistance to the underdeveloped areas. A new program, perhaps based on the current Point Four project, will have to be worked out.

If world disarmament ever comes about, the U.S. might contribute, as President Eisenhower has suggested, a fund to help underdeveloped areas.

The present gap between those areas and the U.S. isn't measurable in dollars and cents; it can only be visualized by picturing human beings tied to the land and playing the role of farm animals. Even with government funds we can't expect to raise the standard of living in those regions to anything approaching our own standard.

The most we can do with public funds is to provide loans for creating or expanding such basic facilities as roads, railroads, ports, power, communications, hospitals, schools, and homes. These aren't projects that can—or should—attract private capital. But they are vital prerequisites.

- **Helping Themselves**—All the encouragement for investments abroad can't be left to the U.S. The underdeveloped countries must help themselves to attract American capital—first by providing a stable economic and political climate and, second, by plowing their own capital back into productive use, not into extravagances.

There are signs already that needy nations are mending their ways. Iran has discovered that all its wealth in oil is useless without foreign participation; Argentina is easing its nationalistic laws after realizing that its ambitious development schemes fall flat without loans from abroad. In the future, you can expect foreign governments to offer more tax incentives to American investors, and more safeguards against expropriation of American industrial property.

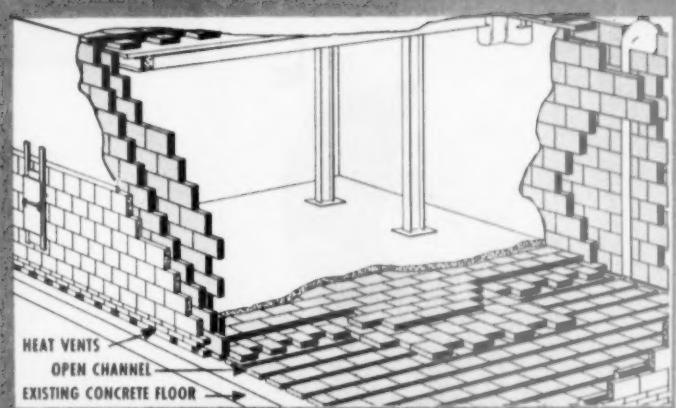
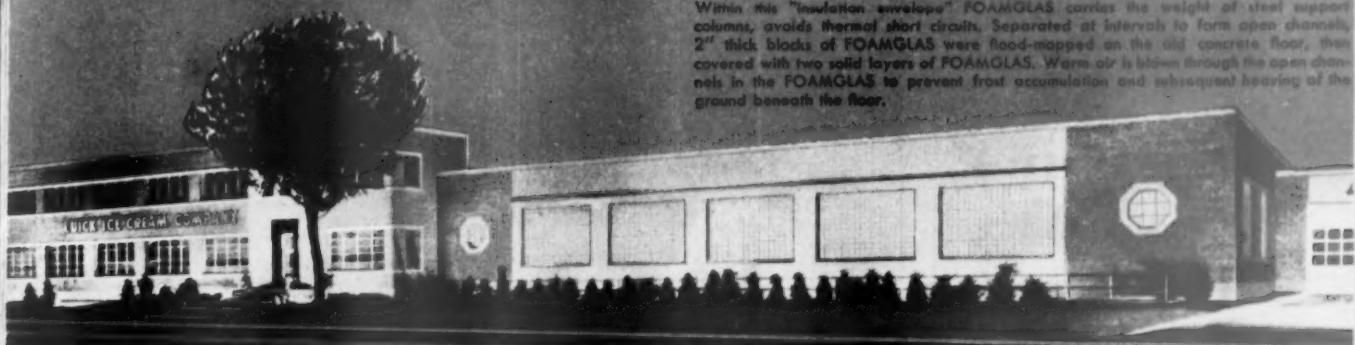
IV. Industrialization

The third pressure toward a broadening of our economic sphere is the keen desire of backward agricultural nations to industrialize.

These countries are no longer forced

National Dairy's
Luick Division
cuts construction costs
by insulating with

FOAMGLAS®



Within this "insulation envelope" FOAMGLAS carries the weight of steel support columns, avoids thermal short circuits. Separated at intervals to form open channels, 2" thick blocks of FOAMGLAS were flood-mapped on the old concrete floor, then covered with two solid layers of FOAMGLAS. Warm air is blown through the open channels in the FOAMGLAS to prevent frost accumulation and subsequent heaving of the ground beneath the floor.

When National Dairy's Milwaukee Division, Luick Ice Cream Co., constructed a new ice cream hardening room to handle increased business, they used FOAMGLAS, the rigid, cellular glass insulation, for walls, floor and ceiling. Luick found:

The exceptional load bearing ability of FOAMGLAS, able to bear the weight of a concrete floor and roof supporting columns, allowed them to construct their new hardening room *within* the existing plant structure by installing FOAMGLAS directly on the old floor. This construction method saved them two months time and the cost of floor excavation or additional exterior construction.

Luick used FOAMGLAS also because it provides the constant insulating efficiency they need to maintain an unvarying 20° F. temperature within the hardening room. It also resists moisture, is non-combustible and vermin-proof.

You, like Luick, can take advantage of these outstanding FOAMGLAS characteristics to solve *your* insulating problem. To learn how, send for a sample of this remarkable insulation along with new, fully informative booklets covering the use of FOAMGLAS for refrigerated structures (illustrated at left), piping, tanks and equipment and normal temperature buildings. Write Dept. F-10313 . . .

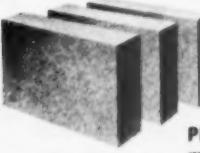


The walls are composed of concrete blocks and two layers of 4" thick FOAMGLAS to provide maximum insulation effectiveness.
General Contractor: Dahlman Construction Co., Milwaukee.
Insulation Contractor: Sprinkman Sons Construction Co., Milwaukee.

PITTSBURGH CORNING CORPORATION
One Gateway Center • Pittsburgh 22, Pa.

FOAMGLAS®

the cellular glass insulation . . . it stays dry!



Pittsburgh Corning also makes PC Glass Blocks



**sail like
kon-tiki
with the sea**

Kon-tiki sailed a powerful way without paddle, steam or motor...simply went where the ocean and the winds were going. In business, the trick is to study the *sales* current, and ride with it. Like riding with the push of the plastics trend, right now.

The flow of plastics production has literally *quintupled* in the last ten years! It keeps getting bigger, as chemists, engineers and designers think up new ways to use new kinds of plastics.

Plastics cut costs in production and materials...make instruments behave in a tropical rain...develop new dielectric parts for power transmission...put glamor into products and packaging.

Many industries are growing by *using* plastics...many others by *selling to them*. Are you? Might be worth looking into.

Ask MODERN PLASTICS. After years of helping makers of materials, machines and supplies to ride with the plastics current (and giving the current much of its push) we can provide a fair sales chart of this booming market.

**MODERN
PLASTICS**

A Breskin Publication
575 Madison Avenue
New York 22, N.Y.



Member ABC—ABP

Dollars will be flowing back to U.S.



to serve only as suppliers of one or two commodities. With modern transportation and production methods, they, too, can build up diversified industry, to process some of their own raw materials and to raise living standards for their people. When they are less dependent on market fluctuations of their one or two commodities, these countries can consistently buy more goods, attract more investments.

• **Uneasy Transition**—The switch from plow to punch press is nothing to be tried impulsively. It can't be made overnight, as some countries are finding out now. The trick is to make an orderly transition from raw material production to industrial production, or to achieve a balance between the two.

What has happened lately in a few countries is this: They have cut down on production of food and raw materials in favor of industrialization—before the industrialization could possibly be expected to pay off. As a result, their sales of commodities have slumped, they haven't raised enough food for themselves, and their income has dropped so they can't buy the needed food abroad.

Thus, we have a paradox in the world's food supply. This year is the first time since before the war that population and food supply—on a global scale—have been in balance. Yet the distribution of this abundance of food is badly awry: Big surpluses are in the highly developed countries like the U.S. and Canada; big shortages are in the underdeveloped countries that used to feed themselves or have farm surpluses before they arbitrarily went industrial.

• **The Way Out**—Economists see a two-stage cure for this transitional trouble:

• Underdeveloped areas must learn to walk before they sprint—they must not industrialize so fast that they lose their commodity markets. The grass isn't that green on the other side of the factory fence; besides, industrial production inevitably falls off when workers don't get enough to eat.

• Agricultural nations with industrial ambitions must learn the advantages of mechanizing their farms along with their factories. Then a reduced work force and a reduced farm acreage can keep a nation self-sufficient in food

to buy:



\$2-billion a year of farm products



\$5-billion a year of consumer durables



\$15-billion a year of capital equipment



and \$8-billion a year will come in as return on investments

and fibers while industry is built up. • **Making It Clear**—Economists won't answer for what happens to their logical forecasts if the U.S. should let the world think our aid to backward nations is a new form of dollar diplomacy, of the kind of colonial imperialism in which the supplier of resources is subordinate. Our aid, they say, must clearly be on a mutual-benefit footing.

That means a real effort on our part to raise the standard of living abroad, to promote qualified foreign employees into top managerial posts where they can help make policy as well as give technical supervision. Our citizens and our corporations will have to abide by the laws of the countries where they operate. Foreign citizens will resent enclaves of Americans living luxuriously in the midst of native poverty and also seeking to be a law unto themselves.

Economists think we're learning these things fast—oil companies have been notably successful in working with local peoples—and they think we'll do even better as American participation abroad gets more widespread. So they see no major barrier to fulfillment of their predictions for 1975.

• **Where to Invest**—The next question is where our investments will do the most good, to our own country and to the foreign countries. In total, the area will be that which is mapped on page 101. In detail, it will be:

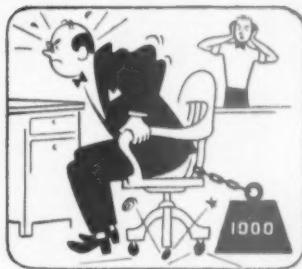
Canada. Our northern neighbor is already our No. 1 customer.

South America. Prior to 1940, the U. S. supplied only 10% of the continent's total imports; now, in a much bigger market, we supply 50%.

The Middle East. Outside the Western Hemisphere, this has been our major outlet for investment since the war. This interest will continue, and the increasing royalties from oil should help the countries there to develop on a massive scale.

Africa. Our present trade with the entire continent amounts to little more than \$500-million a year. Yet Africa contains immense supplies of minerals we need: bauxite, manganese, cobalt, uranium. With its growing requirements, the U.S. will undoubtedly play a big part in putting these resources to work.

Australia. This island-continent not only has untouched raw materials but



New notion of motion!

You're sitting pretty when you equip your chairs with Bassick "Diamond-Arrow" Casters. Unique Bassick two-level ball-bearing construction gives the easiest, smoothest swivel action. There are sizes for all types of office equipment . . . and for beds and furniture in your home. Soft rubber tread or solid composition wheels. For wood or metal furniture. Check your office supply or hardware dealer.



**Comfort's
there—
under
your chair!**

Chair makers have the right angle when they manufacture swivel chairs with Bassick "Flo-Tilts". This tilting and swiveling mechanism gives quiet and smooth action . . . comfortable and safe balance. Tilting is controlled by long-lasting rubber torsion unit — no metal springs to break. Leading brands of office chairs have "Flo-Tilts", because their makers

know it's a sure way of protecting the seat of responsibility. THE BASSICK COMPANY, Bridgeport 2, Conn. In Canada: Belleville, Ont.



MAKING MORE Kinds OF CASTERS . . . MAKING CASTERS DO MORE

READ ALL ABOUT THE LATEST IN AIR GAGING



JUST OFF THE PRESS, this book contains up-to-the-minute, complete specifications for the Dimensionair. It explains the important advantages of the new balanced air system. It also tells about our entirely new air gage accessories — the Arnold Air Gage, Air Electric Switch, and Air Gaging Electronic Controls. You will also find useful tables showing plug, ring, and air snap sizes available from stock. Here, conveniently available in one attractive catalog, is a fund of the latest authoritative reference data on the Air Gage, developed by Federal during many years study of actual shop use requirements and engineering research. Ask for your copy today and profit from this valuable new book.



Largest manufacturer devoted exclusively to designing and manufacturing all types of DIMENSIONAL INDICATING GAUGES.

FEDERAL PRODUCTS CORPORATION • 210 Eddy St., Providence 1, R. I.
Please send me your new catalog on Air Gaging

Name _____

Company _____

Street _____

City _____

State _____



Special Report

also has the attraction of being politically stable. As more U.S. capital becomes available for investment, Australia may experience a Canada-type boom.

In addition, Europe won't be written off by U.S. investors. A slow but steady flow of investment will continue to go to the continent.

V. Split in the Markets

Spread of the U.S. economy will press Europe and Asia back into their traditional channels of trade. The world will be divided into roughly three common markets:

- The U.S. sphere, already described.

- A Far East market, with Japan selling its manufactures on the Asian mainland and taking raw materials in exchange. Only a war can prevent this revival of prewar pattern.

- A European market somewhat different from before the war. The satellite nations of East Europe have gone too far down the road to industrialization ever to provide West Europe with foodstuffs and minerals in prewar volume. But trade can—and will—resume on a large scale.

- European Market—The Soviet Union itself is potentially the biggest customer for Europe's industry. The Kremlin isn't likely ever to agree to peaceful coexistence, but it has already had to expand its imports to appease its own citizens. If this trend continues, Europe will be the chief beneficiary.

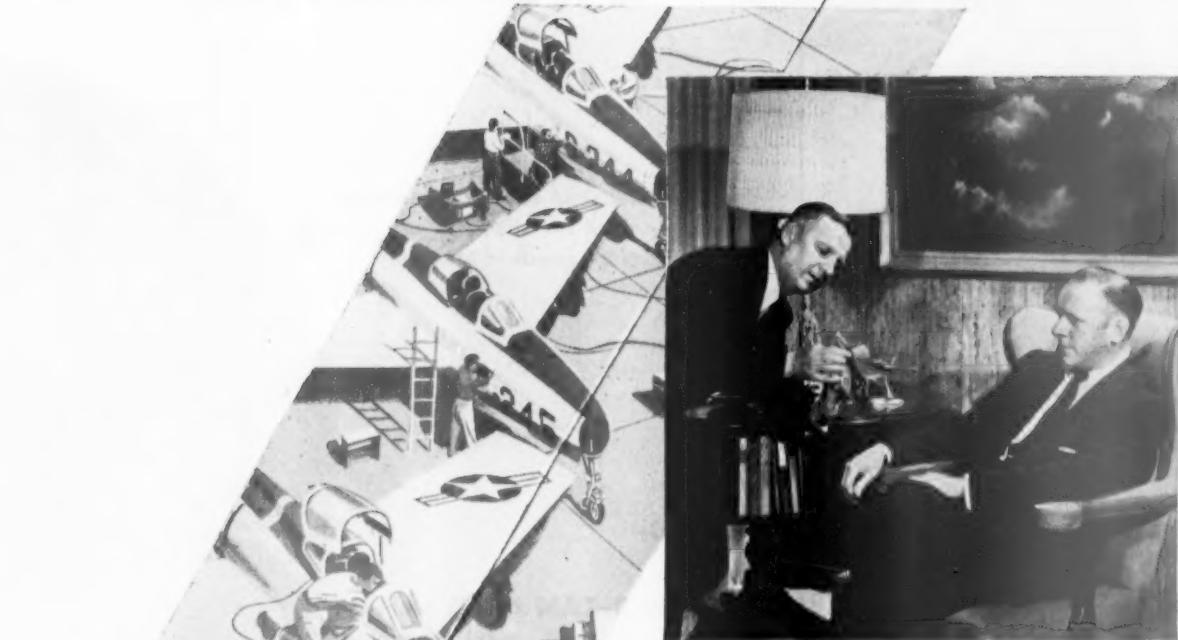
Europe looks like a market area of at least 450-million people by 1975. And European industry will also be able to sell in competition in the other broad market areas. Our own imports of European goods, for example, will increase, both in luxury items and in special machinery—optical instruments, electronic gauges, high-speed cutting tools—at which Europeans excel.

- Competition with Us—European countries—and this will apply to the Japanese, too—will work hard to build up profitable trade with our expanded market. This will take some doing, though. Trade tends to follow investment, and the U.S. will be putting up the lion's share of capital, directly or indirectly.

Britain is contributing through such projects as the Colombo development plan, and France also has a development program. But both are predicated on grants or loans from the U.S.

Economists see no reason for the U.S. to fear stiffer competition—though some industrialists and many politicians won't agree. From the economists' viewpoint, history demonstrates that Europe and Japan, for example, buy more goods from us as their own ability

PATTERN FOR PEACE



MUNDY I. PEALE,
President and General Manager of
Republic Aviation . . . evaluates the
PRODUCTION record with syndicated
INS columnist and TV-radio commentator
BOB CONSIDINE.



"America's cooperative taxpayer rightfully expects that the Nation's defense materiel be of the highest order. Since today's fighter aircraft are of necessity extremely versatile, those who plan and produce them must possess an intimate knowledge of the diversified missions they are called upon to perform. ▷ ▷

"In direct relation to this, the economies of our new defense program demand more return from the expenditure for air power than ever before in our history. ▷ ▷ "The production knowledge and waste-eliminating skills perfected during World War II . . . when REPUBLIC built more than 15,000 Thunderbolts . . . has been significantly demonstrated by the turning out of more than 4,450 Thunderjets, over 3000 during the Korean War. It emphasizes that only a company ready, willing and able to work hand in hand as a team with our Air Force, could meet this challenge of leadership."

REPUBLIC AVIATION

FARMINGDALE, LONG ISLAND N. Y.

Makers of the Mighty Thunderbolt · Thunderjet · Thunderstreak



One World



**lets it nest till
ready to use**

Sheet metal stampings with *staked* or *welded* studs cannot be satisfactorily nested for transportation from one department to the next. The protruding studs damage painted or polished surfaces and are themselves easily bent and scraped in transit. The QUICKEY fastener, however, snaps in just before final assembly; its leaf spring locks it securely in place and, if damaged during later assembly operations, any QUICKEY fastener can be replaced, even in blind assemblies.

QUICKEY fasteners are available in a complete range of sizes.

These and thousands of other specialized fasteners and allied devices designed by United-Carr help speed assembly, cut costs, even improve product performance for leading manufacturers of automobiles, aircraft, electronic apparatus, appliances, furniture. If you need special fasteners in volume, check first with United-Carr — FIRST IN FASTENERS.

UNITED-CARR

United-Carr Fastener Corp., Cambridge 42, Mass.

MAKERS OF **DOT** FASTENERS

ASIA will send some raw materials to Europe and America, will buy manufactured goods in exchange

THE AMERICAN AREA will buy raw materials, send capital goods and investment

With U.S. dollars as common currency,

to earn dollars is increased. And underdeveloped areas become better customers as they industrialize. Individual companies may lose sales in those countries as they begin to manufacture for themselves, but our total economy gains enormously.

• **Bad Example**—We'll prosper, economists say, as long as we don't make mistakes such as Britain has made with respect to India. In 1910, Britain exported nearly 6-billion yd. of cotton textiles, mostly to India; by 1950, India had built up its own textile industry, and British exports of cotton fabrics had dropped to 800-million yd. in all.

Britain should not have been unprepared for this eventuality. The British themselves had sold the textile machinery to India. They should have known that they would lose sales of finished textiles; it was their cue to shift the export emphasis to something else, such as farm machinery.

The industrialization in even one economic segment of a country won't often be as fast as India's. Mostly it will be a slow and expensive process. It should keep our capital goods industries busy for many years.

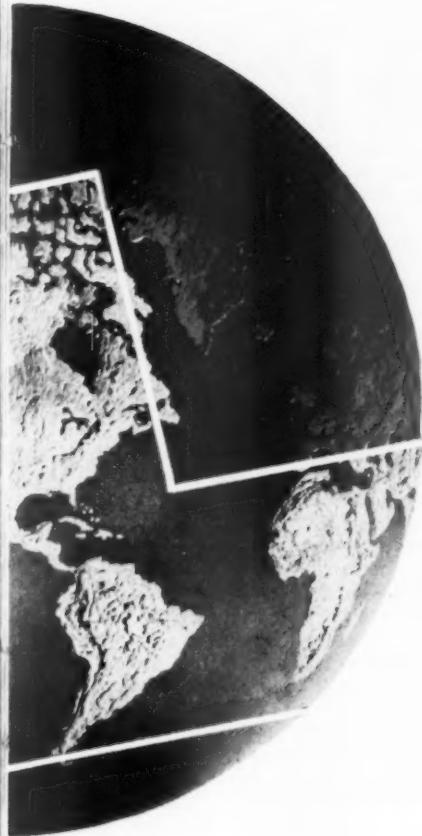
VI. U.S. Leadership

As the world's biggest buyer and seller, the U.S. will be the dominant economic force in the future. We will emerge—to paraphrase Carl Sandburg—as Hog Butcher for the World, Tool Supplier, Sender of Wheat, Buyer of Ores, and the World's Banker.

As such, we will move to fill the vacuum left since before World War I, when Britannia ruled the seas. Our role in the last half of the 20th century promises to be as significant, if not exactly the same, as Britain's role in the 19th century.

• **Stability First**—The world will prob-

Three Markets



EUROPE will buy raw materials from America and Asia and sell both luxury goods and capital equipment

all three markets can trade with each other

ably never go back to wide-open, multilateral trade—the worldwide desire for stable, full-employment economies comes before all other concepts.

When Britain, for example, is unable to export enough to pay for its imports, it resorts to import quotas, exchange controls, and other devices to maintain living standards. Few governments, of any political stripe, would risk domestic instability for the sake of international stability.

Our own future purchases of raw materials in tremendous amounts will be a boon to world trade, but they won't necessarily provide stability. Many nations already look on our purchasing power with mixed feelings. They fear our ability to raise or lower prices for most basic commodities. After Korea, we sent prices sky-high; later we sent them tumbling. The effect in commodity-producing countries was violently unsettling.

• **International Controls**—The primary producing nations will probably press for long-term stabilization contracts that would protect them against big swings in U.S. buying. This won't please advocates of entirely free trade, but many economists see devices of this sort as the only way we can get some degree of free trade.

Investments, too, may bring about international controls. The flow of capital is dependent largely on full convertibility of currency—at least, its maximum movement can't be attained without convertibility (BW-Mar.28 '53,p194).

Economists assume that, by 1975, the rest of the world will have enough dollars—through export sales, through U.S. investment, through income from tourists and American residents abroad—to make convertibility feasible. They think we'll have to provide money, though, for a stabilization fund that



WORTH MORE OF YOUR TIME

Specification Analysis can be profitable

Manufacturing processes are sometimes built around standard steel specifications in the mistaken belief that there are no alternatives. For example, some manufacturers grind cold rolled strip steel or the fabricated part to secure close gauge tolerances, while others use a trimming process to cut off "ears" on deep drawn parts. Both of these examples represent costly manufacturing operations which are often unnecessary if there is an understanding that cold rolled strip steel can be purchased to specifications which will not produce the undesirable characteristics you seek other methods to avoid.

Time spent with our specification engineers in reviewing your specifications for various types of cold rolled strip steel may develop recommendations for changes in your specifications which will have the effect of lowering your end product cost. "Specification Analysis" can be profitable. May we review your strip steel specifications and interpret them in terms of what CMP precision strip steel made specifically for your requirement can do for you?



**the Cold Metal Products co.
YOUNGSTOWN 1, OHIO**

NEW YORK • LOS ANGELES • CHICAGO
INDIANAPOLIS • ST. LOUIS • DETROIT
CLEVELAND • SAN FRANCISCO

It's MORE than fire safety, SIR...



....it's
ENGINEERED
"Automatic"
fire protection

When it comes to the planning of fire protection for your plant or business, there's considerably more to be viewed than the price. Of course, you will want to be fully informed on the economics of protecting your property, but it's equally important to know that the method of protection is the best available for any given area of your building.

It is for that reason that through the years we have not limited ourselves to the design and installation of only certain types of protection. Like you, we study the economic factors involved. Then, following a thorough investigation of all elements of your overall fire safety problem, we design, manufacture and install the type of protection *best by test* for maximum safety. It's engineered "Automatic" FIRE PROTECTION for you . . . the finest available at any price!

Why not find out how engineered "Automatic" FIRE PROTECTION can save dollars for your business whether you ever have a fire or not. Remember, what's worth insuring is worth protecting.

Write for Bulletin 66, the ABC of Fire Protection. It's FREE.

"Automatic"
Sprinkler

CORPORATION OF AMERICA

YOUNGSTOWN, OHIO

Offices in principal cities of
North and South America



Special Report

could prevent sudden fluctuations in foreign currencies.

• **Investment Pattern**—Granted that convertibility of currency is achieved, we will probably see a mixed investment pattern 25 years from now:

• Investment by the World Bank or a new International Finance Authority, for development of basic facilities abroad. Most of this agency's funds would come from U.S. taxpayers.

• Other long-range investment by quasi-government bodies, such as the British Commonwealth Development Corp. In this, the U.S. would work with other investing nations (as in possibly an Anglo-American-Congo Corp.) and with native governments (as in, say, an American-Arabian Corp.).

• Direct investment overseas by U.S. corporations.

• Private portfolio investment in foreign bonds and stocks, chiefly through investment trusts.

In many cases, U.S. companies must be prepared to accept native representation on boards of directors, and a 50-50 split of profits. In return, U.S. companies would get guarantees protecting their investments.

• **Tariffs**—There may never be a day when we have no tariff barriers, but by 1975 they will have lost a lot of their effect in restricting trade. Except in a few special cases, economists say, tariffs will no longer perform their old function of protecting U.S. industries—international controls and regulations should lessen the need both for tariffs and for import quotas. The same controls would take the sting out of other countries' tariffs.

International controls will have to work for both sides. As economists see it, the U.S. is inevitably the world's creditor and the world's principal buyer of materials. We have the most to lose from instability, they argue, and a flexible, well-administered system of international controls may prove to be the best guarantee of free enterprise at home.

REPRINTS AVAILABLE

Single copies of this Report to Executives will be available in about four weeks to BUSINESS WEEK subscribers upon request without charge. Other copies will be billed at the following rates: 1 to 10 copies, 20¢ each; 11-100 copies, 16¢; 101-1,000 copies, 12¢; over 1,000, 10¢. Address orders for reprints to Reader Service Dept., Business Week, 330 West 42nd Street, New York 36.

You Can Cut Many Costs With OZALID Copies!

End the costs of re-typing . . . proofreading . . . and human errors . . . by replacing your manual copying methods with Ozalid!

With the efficient desk-top Ozamatic machine, you make direct copies of paperwork—letters, invoices, accounting reports, charts, or practically anything written, typed or drawn on ordinary translucent paper! Your first copy is ready in seconds—clean, dry and ready-to-use—or up to 1,000 letter-size copies in an hour, for less than 1½¢ each.

Wherever you have a copying job, chances are you can cut costs by using Ozalid!



See how ORDER HANDLING is Simplified by using OZALID copies!



Speeds Up Order Filling!

Send Ozalid copies of original order, quickly to inventory control . . . to stock locations . . . to customers as acknowledgment, and to file.



Expedites Shipments!

Use Ozalid copies of parts of original order for packing memos . . . bills of lading . . . delivery slips . . . labels.



Keeps Billing Current!

Enter prices, extensions and total on original order and use Ozalid copies for customer invoices . . . for accounts receivable files . . . sales records.

Send coupon for full details, or call the Ozalid distributor listed in the classified pages of your phone book under Duplicating Equipment and Supplies.

OZALID, Dept. A-11
General Aniline & Film Corp.
Johnson City, N. Y.
Gentlemen: Please send me full information on your Ozamatic machines.

Name _____

Company _____

Position _____

City _____
Check the Application of Greatest Interest:
 General Accounting Order Handling

Cut Copying Costs . . . use **OZALID**

Johnson City, N. Y. A Division of General Aniline & Film Corporation.
"From Research to Reality."
Ozalid in Canada—Hughes Owens Ltd., Montreal

Synchronized Power

writes earth-moving success story



One of Roy Kohl's five scrapers hauling a 24-yard load at Lockbourne Air Force Base. On this 212,000 yard job, the scrapers load in 90 seconds and travel to the spreading site at 30 mph.

In 1949, Roy Kohl was a basement excavating contractor in Ohio. During the last four years he has changed his operation and has moved more than 2½ million yards of ore, earth and clay on many types of big jobs.

His success story is built around the operation of 5 tandem-engine Euclid scrapers. The tandem-engine application—one pulling and one pushing—was made possible by Allison TORQMATIC Drives which synchronize the power of both engines through a simple control.

Kohl, like other operators, has found that Allison matched Torque Converters and hydraulic Transmissions contribute many ways to the more successful use of heavy-duty equipment. Most important, of course, is the ease

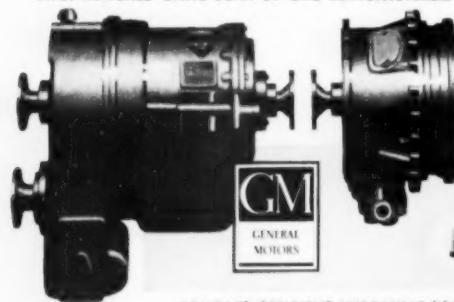
of operation; the engines' ability to work at peak efficiency; and the cushioning effect which eliminates harmful shock on engines and the entire drive line.

Kohl reports his "Eucs" operate under all conditions, and climb up to 50% grades under full load. The five units now average over 2,000 hours a year. His first scraper moved more than a million yards without any major maintenance on Converter or Transmission.

Your dealer can give you more information about low-cost equipment maintenance where Allison TORQMATIC Drives are installed or you may wish to write Allison direct for full particulars.

ALLISON DIVISION OF GENERAL MOTORS
Box 894BB, Indianapolis 6, Indiana

FIRST MATCHED UNITS BUILT BY ONE MANUFACTURER.



ALLISON TORQMATIC DRIVES

**Unbeatable Team for Maximum
Operating Economy**

- * Quick-shifts at full throttle with fingertip hydraulic control.
- * Holds power to load at all times—no clutch pedal to push—no gearshift guess.
- * Cuts maintenance cost by absorbing shock—eliminates engine lugging—prolongs equipment life.
- * Only torque converter-transmission team designed to work as a unit and built by one manufacturer.

Allison **TORQMATIC DRIVES**

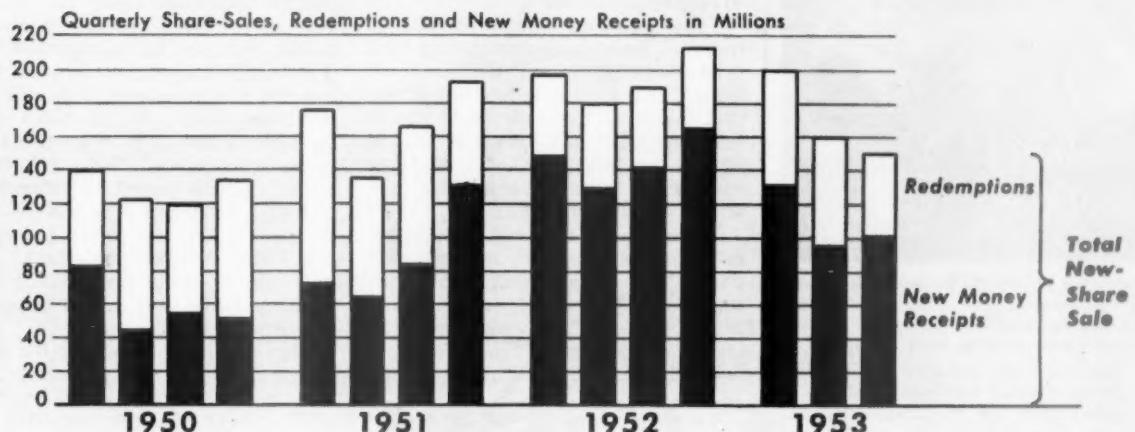


COMPACT, EFFICIENT HYDRAULIC DRIVES FOR CRANES • TRUCKS • TRACTORS • SCRAPERS • SHOVELS • DRILLING RIGS

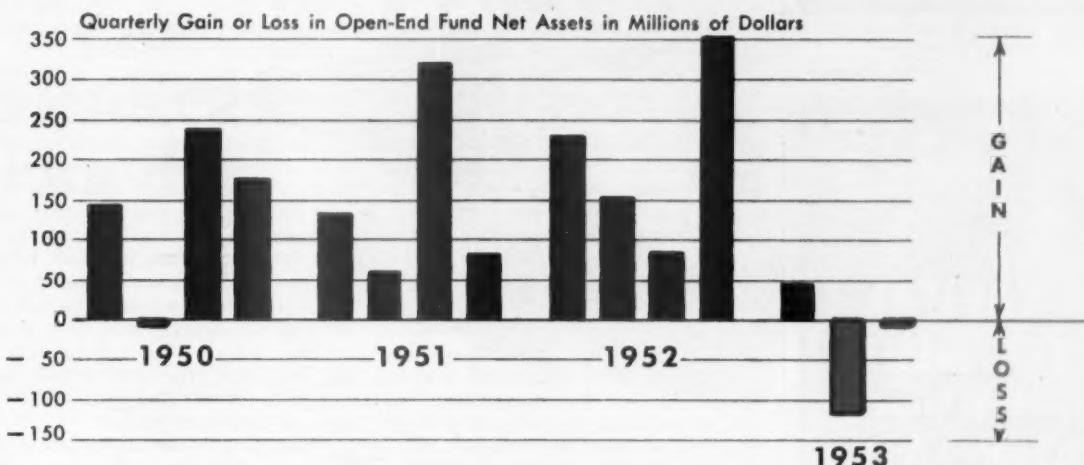
FINANCE

How the 1953 Bear Market Has Hit the INVESTMENT TRUSTS

NEW MONEY RECEIPTS have dropped...



...Instead of tremendous GAINS in NET ASSETS, there are now LOSSES



Data: National Assn. of Investment Companies.

BUSINESS WEEK

First Setback for the Open-end Funds

The snap frosts that have nipped the stock market this year have hit the vaunted open-end investment trusts, just as they have ordinary investors and traders. The funds are no longer blooming so profusely as they did earlier in the postwar period.

• **Double Blow**—The chill has hit the funds in two ways. Sell-offs in the market have cut down the value of their vast security holdings. And the appearance of declining markets has checked the public's enthusiasm for the funds'

own shares, as well as for generally traded securities.

The trade's own figures show that April-September, 1953, were in many ways the worst six months the funds have experienced for quite a while. You see it in the charts above, both based on figures from the National Assn. of Investment Companies:

New share sales hit their lowest mark since April-September, 1951. Second-quarter sales were 11.4% below 1952, the third quarter was off 20.2%.

New money receipts—the difference between new share sales and redemptions—were at their lowest point in two years. The second quarter was 26.6% below 1952, the third quarter was down 28.5%. (In the first nine months, they were down 10%.)

Net assets dropped off \$121-million, to the lowest mark in a year. That indicates, very roughly, that portfolio values fell \$212-million in the second quarter and \$106-million in the third, for a total of \$318-million. New money

**NEW
EXTRA-STRONG
STAND**

Designed especially for costly office machines

WB
Styline
MS 300

Practically impossible to upset. No sway, no tip, no skid...no more high repair bills due to accidental damage!

Design-constructed to serve 4 ways:

1. Provides a safe, rock-firm foundation
2. Styled to blend with modern offices
3. Offers most leg room...no snagged hose, bruised shins
4. Increases employee efficiency

Protect your investment with Styline

Send card for FREE folder on complete line!

Weber Brothers METAL WORKS

108-B North Jefferson St., Chicago 6, Ill.
QUALITY PRODUCTS SINCE 1885

"...these sags have brought chuckles to the Wall Street individualists . . ."

OPEN-ENDS starts on p. 113

receipts of \$197-million still left the \$121-million fall-off.

These sags have brought chuckles to the Wall Street individualists who have been throwing off on the funds all along. This hard core has maintained that the Street generally could handle large and small investments at least as well as the funds, and at a lot lower cost. Even some "independent" observers go along with this.

The argument has been that anyone could have made money in the market during the postwar years when the funds were giving their best performance. But, say the skeptics, once the market is hard hit, the funds will prove vulnerable for all their diversification and the like.

To these warnings, the antifunders of late have added: "What you've been seeing recently is only a starter."

• **Exaggeration**—The warning may be rather overstated. For all their weaknesses, the funds haven't taken anywhere near the beating that was predicted for the day when the Big Board stopped booming.

Take the rate of redemptions. It's up, but nowhere nearly so much as predicted (BW—May 9 '53, p136). The trade reports that the ratio of turn-ins to new share sales was 33.2% in the third quarter, compared with 40.1% in the second, and 33.7% in the first.

In other words, recent performance does not prove that earlier ballyhoo for the funds was excessive. The open-enders are pointing with pride to the third-quarter showing, when portfolio shrinkage was cut \$106-million, only half what it was in the second quarter. They claim that this improvement was due just as much to good management as it was to either the "summer rally" or the rally that started in mid-September. And they ask their critics whether they could have done better on their own, in this year's market, than the funds did—assuming the same objectives.

That's where the argument starts.

• **Indexes**—The open-enders, producing some strong support, say that it's most unlikely you could have managed your own funds as successfully as they did.

At this point, the antifund people counter with a comparison, for the first nine months, of Standard & Poor's 90-stock index with the well-known Henry Ansbacher Long mutual fund index. This shows that 22 stock funds had an average decline of 11.56%, compared with the 12.11%

drop in S&P's indexes. The same comparison, extended back to Sept. 30, 1952, shows the funds off 4.58%, compared with 4.89% for the index.

The critics want to know whether this thin edge for the funds is enough to compensate shareholders for the average 8% loading charge on top of asset value that they paid when they bought their shares, or the average 15% of the trusts' annual investment income that goes for management fees.

• **Rebuttal**—The open-enders, for their part, say this comparison tells only half the story. They cite the much more favorable picture given by another Long index, based on 17 "balanced" trusts whose charters permit investment in preferreds and bonds as well as common stocks. This group shows a drop of only 7.53% compared with the 12.11% of S&P's 90 stocks for the first nine months, and of only 2.77% compared with 4.89% for the year.

They also point proudly to the many individual stocks that have lost 20% or more for the year (BW—Oct. 24 '53, p159). These, they say, are often just the shares that the average investor, or his broker, would have snapped up a while back, and then failed to unload at the right moment. Such woes, the argument goes, would not have occurred in an open-end fund, and loading and management charges would have been well worth-while.

Actually, this argument is an oversimplification. Some Big Board stocks are still behaving perfectly well. Not all the smart market counselors have been signed up by the investment trusts. Plenty of people who have done their own buying are sitting pretty now.

• **Erosion**—As for the 1953 erosion in trust fund portfolios, it's hard to say whether the funds have actually done better than the market generally—as over-zealous salesmen have been claiming they would. The performances of the individual open-end funds have varied, as usual, almost as widely as those of individual stocks.

That's as it should be, for among the funds you find basic differences in the types of securities they can hold, and in their investment objectives. You can find some trusts whose shares could be cashed in today for just about their 1952 yearend value. Others show 1953 losses as high as 18.3% in asset values.

Which adds up to the fact that you should pick and choose as carefully in buying fund shares as you do in buying individual stocks. On this year's showing, you would have been much better off with the shares of some funds than you would have been with many individual stocks. On the other hand, many individual stocks have proved to be better 1953 holdings than any of the trust shares.

NO CAPITAL INVESTMENT
Required to Secure
RAILROAD ROLLING STOCK

Industrial Users And Short Line Railroads Should Investigate The
MORRISON PLAN

A Service of
MORRISON RAILWAY SUPPLY CORP.

General Offices — BUFFALO, N.Y.

MATERIALS MOVE FASTER...



..thanks to
**CAR
SHAKERS
like this!**

TAKES TIME to make the cement, cinder block, copper, steel and glass used in modern home building... But not as long as it used to!

One production bottleneck was unloading raw materials from hopper-bottom gondola cars—often requiring from 3 to 6 man-hours per car.

Now it can be done in as little as 2 minutes! An Allis-Chalmers car shaker is lowered on top of the loaded car. An operator presses a button to start an eccentric

motion in the car shaker which vibrates the whole car. Even sticky, wet or frozen material is quickly loosened and slides easily through the hopper bottom.

No men enter the car. It's safe, rapid, economical.

Allis-Chalmers car shaker fits all types of gondola cars without adjustment or damage to cars or track, gives long service with low maintenance. For bulletin write Allis-Chalmers, Milwaukee 1, Wisconsin.

**Machinery and Equipment to Help People Produce More,
Have More—LIVE BETTER!**

ALLIS-CHALMERS

GENERAL MACHINERY DIVISION



C-5649

PLANTS IN: MILWAUKEE, WIS.—PITTSBURGH, PA.—NORWOOD, OHIO—BOSTON, MASS.—TERRE HAUTE, IND.—MONTREAL, P. Q.—ST. THOMAS, ONT.



two dictation machines in one!

The new Webcor Electronic Memory business machine cuts up to 50% of your normal dictation costs. That's because you need only ONE UNIT for dictating and transcribing. And secondly, you never need expensive disks, cylinders and belts. The Webcor uses the magic of magnetic wire. Dictate up to one hour without changing spools. When finished, your secretary takes your lightweight unit back to her desk for transcribing. Erasing old dictation is easy. Simply re-record over the old words.

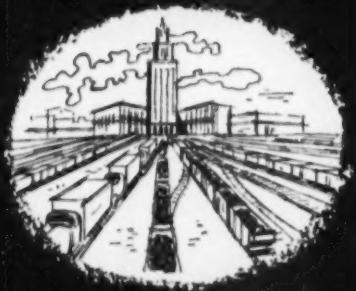
Your Electronic Memory dealer will gladly demonstrate this efficient, money saving machine in your office... without obligation. Write Webcor, Chicago 39, Illinois.

WEBCOR
Chicago 39, Illinois

Cleveland's the Place...

A MARKET SURROUNDED BY MARKETS

Cleveland is a 2½ billion-dollar consumer market... over 3,000 manufacturing plants make it a prime industrial market... and it offers easy access to over half of the U.S. population.



Central National Bank can serve adequately the banking needs of industry locating in this area. For reasons why, write:

**CENTRAL
NATIONAL BANK
of Cleveland**
Cleveland 1, Ohio

MEMBER FEDERAL DEPOSIT INSURANCE CORPORATION



GLENN McCARTHY, with SEC approval, hopes to raise \$17-million to hunt oil. It's a ...

Wildcatter's Comeback

Glenn H. McCarthy, the fabulous Houston wildcatter, is poised for a new sprint toward the top of the financial heap.

He's pretty well placed to make the race that he has run so often. At midmonth, the Securities & Exchange Commission finally cleared the sale of 10-million shares of Glenn McCarthy, Inc. Last week, Texas also cleared it.

The goal is to raise about \$17-million to finance new wildcatting ventures in the U.S., Canada, and in Bolivia where McCarthy has an 870,000-acre concession under very favorable terms.

• **Flotation**—The par-25¢ shares are being offered at \$2, but the financing costs don't look cheap. B. V. Christie & Co., of Houston, will underwrite 1-million shares, and handle the other 9-million on a "best effort" basis. For each share sold by its efforts, Christie will get 30¢—or 15% of the \$2 price.

Both McCarthy himself and B. V. Christie, a partner in the underwriting firm, are already in on the ground floor. There are 1,251,000 shares in the company outstanding, before the public sale begins. Of these, McCarthy bought 1-million shares on Sept. 28, and Christie took 250,000, both paying 25¢ a share. Ralph E. Fair, a McCarthy, Inc., director, owns the other 1,000.

SEC has made sure that McCarthy labels the shares as "speculative," with the main business of the company expected to be "drilling wells on unproved acreage." Still, McCarthy is happy to have hurdled the commission and the Texas "blue sky" laws. About a year ago, both SEC and the state turned the issue down. Now he's convinced that enough buyers will be found to provide the \$17-million capital—\$20-million, less \$3-million commission—to carry on the wildcatting.

• **South America**—The Bolivia part of these operations probably caused McCarthy to speed up his plans. His lease requires that he start operations within a few months. With time running out, he needed to raise the \$1.5-million that he's expected to spend in the first year in the Bolivian area of Gran Chaco province, just north of the Argentine border. Less urgent was the \$4.5-million that is likely to be spent within a year after U.S. and Canadian operations start.

Specifically, the lease requires that by Nov. 25 McCarthy ship to Bolivia a drilling rig and other equipment capable of drilling three 6,000-ft. wells. Drilling must start within three months of the arrival of the equipment. McCarthy has already posted a \$100,000 performance bond.

The Bolivian operations will be carried out by a McCarthy subsidiary, which must be set up within three years, with \$5-million capital. For a starter, McCarthy has \$500,000 worth of equipment to be shipped next month, while he and about 16 technicians expect to be on the scene in the next few weeks. Drilling should start in December.

• **Prospects**—Quite a few oil men think that McCarthy's setup in Bolivia is a real coup. Many geologists believe that Bolivia is loaded with oil, perhaps as much as the east Texas field. In the Los Manos area where McCarthy will drill, some 106 oil seepages have been reported—each of them music to a wildcatter's ears.

If oil is found, McCarthy is in a good spot. Bolivia is to collect a royalty ranging from 16.5% to 40%, going up as production rises. In the Middle East and other oil areas, government royalties average 50%. It's a long lease, too:

for 35 years, with a considerable indemnity promised in case of expropriation. McCarthy is exempt for five years from the Bolivian income tax, which runs about 25% of net profit. And his equipment and supplies can be taken in duty-free.

If McCarthy finds marketable quantities of oil, he must give Bolivian needs preferential treatment, the oil to be paid for in dollars at the U.S. Gulf Coast price. He must also sell Bolivia 10,000 bbl. a day for resale to Argentina. This is deliverable at the well-head, freeing McCarthy of transportation worries.

Surveys indicate a good supply-demand picture. Currently Bolivia produces about half of its 3,000-bbl.-a-day needs. Bolivia, Argentina, Paraguay, Brazil, Peru, and Chile collectively have an estimated annual shortage of 160-million bbl. So McCarthy figures he can sell all the oil he may produce in South America.

The Other Side—The deal of course has its vinegar sides. Getting oil out of landlocked Bolivia is a problem, and the nearest available refinery facilities seem to be 1,800 mi. away in Buenos Aires. Shipments to Brazil would have to go via Argentina, with rail costs just to Buenos Aires adding 35¢ to the price per bbl.

McCarthy still hopes to do better than his U.S. predecessors in Bolivia, both of whom foundered on the rocks of politics. Standard Oil of New Jersey went in in the 1920s, but was booted out in 1937, finally getting \$1-million against investments of \$17-million. Superior Oil Co. tried it after World War II, but soon withdrew.

McCarthy, though, is in a special position. Usually, nations grant concessions only to major companies. But he, as a mere wildcatter, has a better chance to avoid the clamor against "Yankee imperialists." Bolivians like his reputation as a tough, self-made man.

What's more, he made his visit to Bolivia at just the right moment. The country was eager to do something about its oil potential, but the government agency lacked the essential know-how and equipment. His proposals came at a time when it was evident that the big companies were likely to be discouraged by local laws vesting ultimate control in the government.

Trouble Over?—In any case, a good many oil people think that the Bolivian deal, plus the financing of his new company, may put McCarthy back on the top of the heap—a position from which he has frequently fallen. In recent years he has been having financial chagrins, notably his nearly \$50-million default on mortgages held by the Equitable Life Assurance Society and the Metropolitan Life Insurance Co.

The mortgage holders took over

"NOW YOU CAN MAKE DRY PHOTOCOPIES IN ANY COLOR"



RIGHT IN YOUR OWN OFFICE INSTANTLY!

ALL ELECTRIC

APECO *Auto-Stat*
SYSTEMATIC

"COLOR-CODE" YOUR PHOTOCOPIES!

Makes photo-exact copies of anything typed, written, printed, drawn or photographed in any color or black and white.

Now make photocopies in color! The amazing Apeco Systematic Auto-Stat makes a dry photocopy in red, blue, green, yellow or any other color—including black and white—in less than 45 seconds. Now—"color-code" orders, invoices, letters, etc.—speed up order filling and office procedure—save filing time! This lightning-fast copying machine prints from any original up to 11" wide, any length, whether printed on one or two sides opaque or translucent paper... all automatically. Finished copies are ready for instant use. Save up to 80% on copying cost by eliminating costly re-typing, hand copying, checking and outside copying service. Offers even greater savings in increased business efficiency.

SO LOW COST!

A complete Apeco Systematic Auto-Stat installation is priced well within the budget of even the smallest firm.



Increase office efficiency with copies in any color for immediate recognition, faster filing, speedier handling.

PRE-PRINTED COPIES FOR SYSTEMS USE



Methods experts acclaim new pre-printed Auto-Stat copy system offering simplified office record procedure tailor-made to your particular needs.



HAVE YOU READ THIS FREE BOOK?

American Photocopy Equipment Co.
2839 North Clark Street, Chicago 14, Ill. Dept. BW-10

Please rush me, without obligation, your factual report on office copying. I understand this free booklet pictures and tells the complete Auto-Stat story and shows how I can use Apeco Auto-Stat in my office.

Name _____

Firm _____

Address _____

City _____

Zone _____ State _____

In Canada: Apeco of Canada, Ltd., 134 Park Lawn Rd., Toronto 14, Ontario



Progress at Whiting

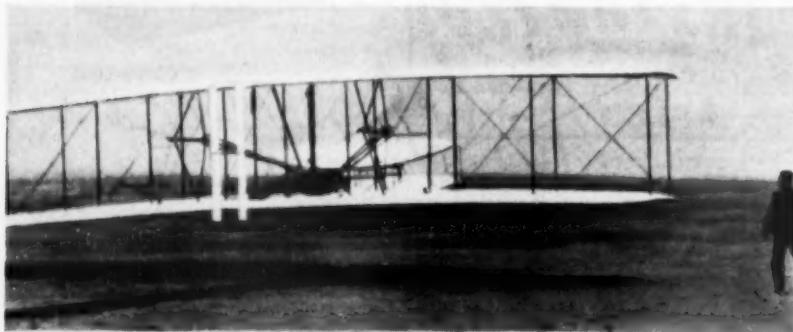
A Bi-Monthly Series by Stevens H. Hammond, Chairman of the Board

Whiting Corporation, in approaching its seventieth year, salutes the aviation industry which this month celebrates a half century of powered flight. We have been privileged to watch this industry develop from the pioneering stage to the big business it is today.

In 1903 when the Wright brothers made their daring experiment at Kitty Hawk, J. H. Whiting, founder of this Company, had already been producing foundry and materials handling equipment for nineteen years. The basic foundation of

The chemical industry is another which Whiting contributions have aided during a period of rapid development. Our Swenson division has offered not only experienced research and engineering but a full line of evaporators, crystallizers, filters and spray dryers. Spray drying, for example, has helped make possible lower cost production of such products as rayon and instant coffee.

Whiting has maintained a separate aviation division for many years which has provided a broad range of services to this



The Wright brothers' plane making its first flight at Kitty Hawk in 1903 . . . nineteen years after organization of Whiting Corporation.

Whiting Corporation's progress has been its desire and ability to furnish new industries beginning their formative and growing years with equipment to save time, labor and money.

For example, Whiting's first customers were in the foundry field and our early products were primarily cupolas and ladles. Afterwards came charging systems, hot blast equipment and many other foundry products. Our overhead cranes were first developed for these foundry customers and this line of equipment led us in turn into the railroad field. Here again we have continuously widened our line to serve a greater variety of railroad needs . . . including train washers, drop tables, portable jacks and cross-over bridges.

Whiting was also instrumental in aiding the development of the mass production industries with their urgent need for new and improved handling techniques. Today we serve virtually every industry with handling equipment that ranges from overhead cranes and Trambeam systems to electric chain hoists and the Trackmobile freight car spotter.

industry. Whiting aviation equipment has included such devices as landing gear drop testers, bomb hoists for military aircraft, aero hoists, engine assembly and propeller handling dollies, and engine stands.

Newest in Whiting equipment serving this field—and potentially of much more direct interest to the air passenger—is Loadair, a system for mechanically parking aircraft flush with terminals to expedite loading and unloading of passengers and cargo.

We are proud that we have been of help to the aviation industry during its first fifty years. It can count on us for continued research, engineering and manufacturing . . . for another fifty years and more!

Stevens H. Hammond
W
WHITING
WHITING CORPORATION
HARVEY, ILLINOIS

McCarthy's two oil and gas companies (McCarthy Oil & Gas Corp. and the New Ulm Corp.) and his chemical outfit, Texas Gas Corp. (BW-Mar. 8'52, p152). Even the super fancy Shamrock Hotel, though McCarthy is still head man, is under close supervision of Equitable. The stock of McCarthy Center, Inc., which operates the hotel, is in escrow and won't be returned until Equitable gets back the millions it is owed.

In the face of these adversities, McCarthy has kept wildcatting in the past year. Six of his last 10 wells were dry holes, and the rest were nothing sensational. Still, that's not too bad against the usual average of eight dry holes for each producing well.

His position in the new McCarthy, Inc., looks promising. His salary as president will be \$60,000 a year. He will get 10% of net profits. And he owns 1-million shares of the stock, which cost him just 12½% of the price at public sale.

FINANCE BRIEFS

Higher rate: The record \$600-million issue of 12-year convertible debentures that AT&T has offered to stockholders will bear 3½% interest. That compares with the 3½% rate on the \$499-million bonds offered June, 1952. Stockholders of record on Oct. 30 may subscribe to the new debentures in the ratio of \$100 worth for each seven shares held. The latest issue will be convertible into stock at a price of \$136 a share, unchanged from the last conversion price.

Delinquency rate: On automobile loans made by CIT Financial Corp. is lower than a year ago, according to president Arthur O. Dietz. CIT's third-quarter earnings were 95¢ per share of common, compared with 77¢ for the 1952 period.

New pipeline: will carry finished petroleum products from the Billings-Laurel (Mont.) refining installations to a terminal at Glendive, for distribution to consumers in Montana, North and South Dakota. Williston Basin Pipeline, Inc., will build the \$7-million, 8-in. pipeline, which will serve Farmers Union Central Exchange, Carter Oil Co., and Continental Oil Co. The line is to be finished next year.

Railway earnings: results for September are tending to run behind the like 1952 month as expected (BW-Oct. 17'53, p62). And, no improvement is anticipated during the rest of 1953, in part because net will be further pared in October by higher wage rates, reflecting a living cost rise.



Production Basis Testing!

The Swenson Research Laboratory Spray Dryer is commercial-size . . . the results you get from tests on barrel or carload lots will match those of actual production conditions!



Here's your cup of coffee!

See what Spray Drying "Magic" can do for your Product

Instant coffee, made fresh in your morning cup, is but one of many products made possible and profitable with spray drying "magic." This chemical process for drying, as developed and perfected by Swenson, has given new form, wider markets and easier merchandising to a host of best sellers . . . pigments, pharmaceutical extracts, ceramic powders, malted milk and many chemicals. The list is getting longer every day. What about your own product . . . can spray drying give it new worlds to conquer? You can find out by talking to Swenson now . . . by getting all the facts on how important Swenson experience can be in your future plans for profits!

SWENSON EVAPORATOR COMPANY

15661 Lathrop Avenue, Harvey, Illinois

Evaporators • Spray Dryers • Crystallizers • Filters

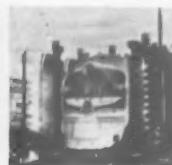
WHITING EQUIPMENT SERVES ALL INDUSTRIES



Overhead Cranes



Foundry Equipment



Railroad Equipment

SWENSON

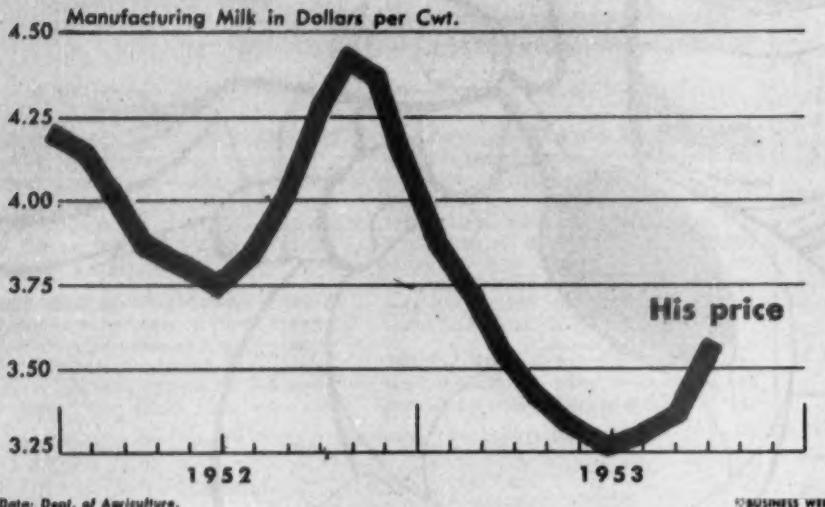
Proven Engineering for the Process Industries
SINCE 1889



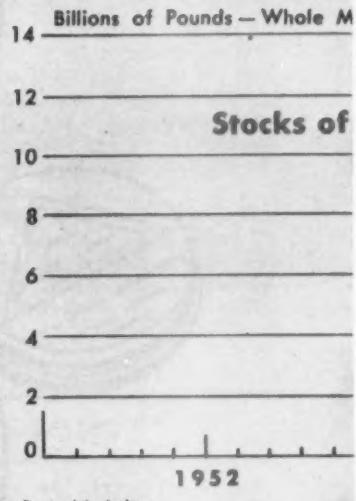
Other Whiting products include: Trambeam Overhead Handling Systems, Electric Chain Hoists, the Trackmobile, Aviation Equipment, and Metal-Working Machinery.

COMMODITIES

The Dairyman's Problem:



The Governm



Butter Greases the Skids for the Dairy

Price supports encourage overproduction while they hold retail prices high in relation to competitive margarine. The government must decide soon what to do about it.

The dairy industry is agriculture's newest, and probably most troublesome, problem child. The crux of the problem is overproduction, and the high price supports that perpetuate it. Dairying shares this headache with other major farm products—such as wheat, cotton, and corn—but in no other area is the basic problem silhouetted in such sharp relief.

The dairy industry has lost a big part of its market—very likely for good. Before the war, almost half of the milk produced went into butter. Since then, butter has lost a lot of ground in the long struggle with margarine—which is now factory-colored, tax-free, and about one-third the price of butter at retail. Yet more butter will be produced in 1953 than in either 1951 or 1952. What the public won't take at support prices goes to the government.

• **Support Buying**—Under its pledge to buy butter at 90% of parity at least until next April, the Dept. of Agriculture already has stowed away 280-million lb. of butter. This is the biggest butter buy in the department's history—and it has been accompanied by heavy purchases of cheese and dry milk, also

at 90% of parity. In all, the inventory has cost the government \$360-million.

Purchases started with thunderclap suddenness just a year ago. Normally, milk production is high in the spring and summer, low in the fall and winter. Flush production in the fall of 1952 reversed the industry's form—and the excess started pouring in to the government.

• **What Did It**—According to dairy economists, the rise was partly due to falling prices for beef (instead of culling their herds for beef, farmers saved the cows for milk), partly because of a top-quality hay crop (dry weather puts milk-making protein in hay). And it was partly because dairy prices had reached an all-time peak in February, 1952 (about a year after other farm prices had started down), which made milk production look like a good thing.

Production reached an all-time peak rate during the mild winter of 1952-53. And it has stayed consistently above last year, all through the summer and early fall, even under the handicap of a severe drought. Dairy prices are now about 15% (chart) under a year ago, and they would have come down a great

deal more except for price supports.

Estimates are that, without any supports at all, butter would be selling at around 40¢ a lb., cheese at 20¢ a lb., and dried milk at 5¢ a lb. As it is, with a 15% price decline, dairy income for 1953 will be about 7% under 1952, with the difference due to higher production.

• **Worse to Come**—In spite of the slippage in dairy income, the outlook is for production to stay on its new plateau, and perhaps even to inch higher, for at least a year or two. The influences that touched off the surge a year ago are still at work. In addition, acreage diverted from corn, cotton, and wheat is being seeded to grass—that broadens the dairy production base more or less permanently.

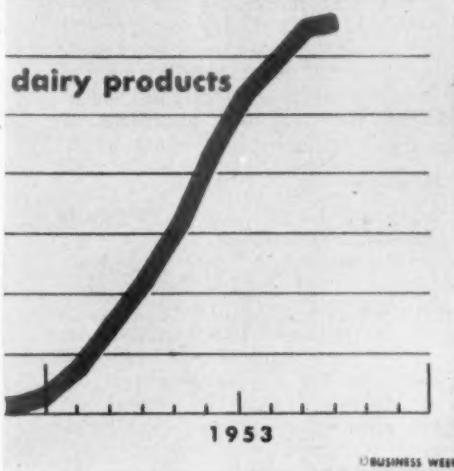
This is bad news for the Agriculture Dept. and for Congressional committees on agriculture.

• **Crisis Next Spring**—The Secretary of Agriculture announces the level of dairy supports once a year, at the end of March. Last March, Secretary Ezra Taft Benson coupled the extension of supports at 90% of parity with a warning that the industry had a year to put its house in order. Since then, whatever change there has been in the situation has been for the worse.

The industry, unable to come up with a basic, long-term solution to the problem, is lining up behind a cam-

ent's Problem:

milk Equivalent.



BUSINESS WEEK

Industry

paign for continued high-level supports. Most of the big dairymen's organizations are calling for a 90%-of-parity support level—some ask for 100%.

• **Political Dilemma**—The government will be making its decision right at the threshold of the flush production season next spring. And with Congressional elections right around the corner, the decision may be politically crucial in several important dairy states.

Short-term alternatives for next March are:

- Agriculture may retain supports at 90% of parity, the maximum under the current law. With this support level, government butter stocks would continue to grow. So would margarine sales—there are many who feel that price supports on butter, by keeping butter prices high, act as a subsidy to the margarine industry.

- Congress may take the whole thing out of the secretary's hands by making dairy supports mandatory at 90% of parity.

- The secretary may lower the level to 75% of parity, the minimum under the law. At the lower level, butter would retail at roughly 65¢ to 70¢ a lb. (it's now around 80¢ a lb.), and would be just that much more competitive with margarine.

Dairymen are dead set against this last plan. Their income would immediately be cut substantially. And even



(Magnified 800 times)

Picture of a splitting headache

That's how this tiny piece of dust from a plant chimney affects most management men. It's tiny, but multiplied by millions, is a terrific trouble-maker!

Armed with the latest scientific facts and most modern equipment, Buell engineers have successfully licked the dust problem for many of America's Leading Corporations.

Such success is the result of more than twenty years of scientific research plus a sound approach to each individual problem.

As a result, users of Buell equipment often report startling improvement in plant-community relations as well as increased production directly traceable to higher employee morale. In many instances such benefits offset the cost of an installation.

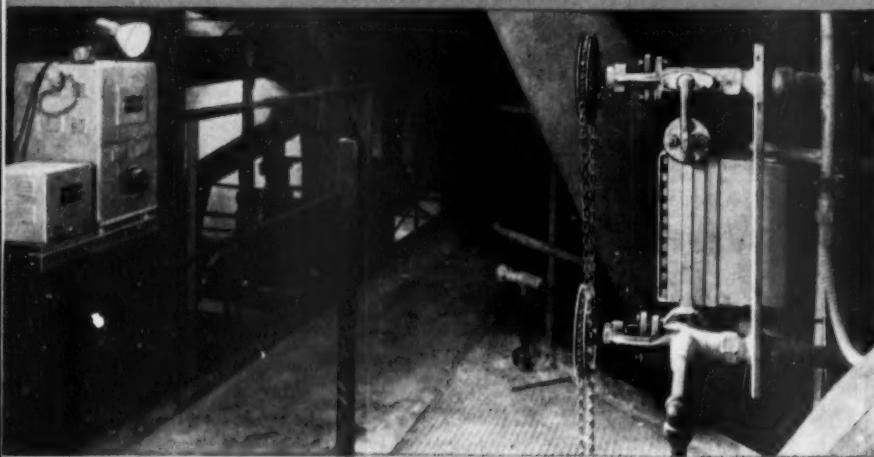
Our informative brochure—*The Collection and Recovery of Industrial Dusts*—explains all three Buell systems for industrial dust collection. For your complimentary copy write Dept. 30-J, Buell Engineering Company, 70 Pine Street, New York 5, N. Y.



20 Years of Engineered Efficiency in
DUST COLLECTION SYSTEMS

NOW You Can See Where You Can't Look

5 YEARS OF CONTINUOUS OPERATION Prove Dependability of **DIAMOND "UTILISCOPE"** (WIRED TELEVISION)



"UTILISCOPE" camera at drum elevation SEES actual boiler water level.

In 1948, Tidd Plant of Ohio Power Company (subsidiary of The American Gas & Electric Company) installed a Diamond "Utiliscope" so that the operator at the control panel could SEE the boiler water gauge several floors above. The camera location (adjacent to the big boiler drum) is hot and dusty. Auxiliary machinery causes vibration. The installation (including the original camera tube) has been in continuous use . . . 24 hours a day . . . 7 days a week for over 5 years, with very little maintenance. This is the first system of industrial television purchased in the U.S. and is still in continuous operation.

Probably there are places in your plant where you can use the DEPENDABLE "Utiliscope" (wired television) . . . the great new industrial aid. It is saving money and improving operations in steel mills, power plants, foundries, coal mines, and a wide variety of manufacturing plants. Write for Bulletin 1136T

6574

DIAMOND POWER SPECIALTY CORP.
FIRST IN INDUSTRIAL TELEVISION

LANCASTER, OHIO • OFFICES IN 39 PRINCIPAL CITIES

Diamond Specialty Limited—Windsor, Ontario

SINCE 1903, DIAMOND HAS MANUFACTURED QUALITY EQUIPMENT FOR INDUSTRY

". . . not much hope for a boost in consumption in the next 20 or 25 years . . ."

BUTTER starts on p. 120

at the lower price, butter would still be selling at more than twice the price of margarine. With margarine now factory-colored, any gain in butter sales at this ratio, they say, is just a guess.

Besides, lower butter prices would pull down the prices of all other dairy products. And for most dairy products, including fluid milk, the big dollar-earner, there has been no slippage in demand and sales that would justify price reductions. Heavy government holdings of dairy products other than butter reflect increased production, not decreased consumption.

• **Long-range**—As long-term, basic solutions to the problem, these ideas are being looked at:

- Aggressive advertising to increase the consumption of milk and dairy products. The industry itself has already moved in this direction. But consumption, except for butter, is already very high. Many dairymen question that it can be boosted much by advertising—at least to an extent that would make a dent in the surplus.

- Production controls. This is the out the government has with other surplus crops. Unless the industry can work out its own methods of bringing production in line with consumption, Congress may take another look at the base-and-quota production plans with which the industry experimented locally in the 1930s.

- A Brannan-type plan of production payments for butter and cheese producers that would bring retail prices down while it kept farm prices up. Aside from being political trouble, the payment plan would be likely to bring the margarine lobby back to Congress in full cry against subsidization of the butter people.

- **Forecast**—For the dairy industry, the unkindest cut of all came this month at the Agriculture Dept.'s annual outlook conference. There, statisticians unveiled tables in which butter consumption was tracked into the future at 4 lb. to 6 lb. per capita (compared with an estimated 8.7 lb. in 1953, and 16.8 lb. pre-war).

The tables, carefully qualified as being "in no sense forecasts," give the industry little room for growth between now and 1975. In fact, at the lowest of a series of projections, the nation's requirements in all dairy products could be satisfied in 1975 with 125-billion lb. of milk. This amounts to an increase of about 5% in milk production to satisfy a population 31% bigger.



By testing motors under desert conditions G.E. gives you more for your motor dollar

In high-altitude combat flying, or in swirling desert sand, aircraft motors must be ready to start anytime. Because they operate mechanisms as vital as bomb-bay doors and wing-flap controls, aircraft motors *have* to be dependable.

That's why this motor has just been subjected to many grueling hours of hot, wind-driven sand in the dust chamber at Fort Wayne, Indiana. It will now be inspected by G-E Engineers to detect the particular problems of desert operation.

The dust chamber typifies the engineering thor-

oughness and precision at General Electric—the resourcefulness that helps build better quality fractional-horsepower motors—of all kinds—for you.

For complete information on G-E specialty motors, G-E standard fhp motors or the famous G-E Tri-Clad* motors, contact your nearby G-E Apparatus Sales Office or Authorized G-E Distributor today.

General Electric Company, Schenectady 5, N. Y.

*Reg. Trade-mark of General Electric Company

647-8

You can put your confidence in—

GENERAL  **ELECTRIC**



Global Favorites!

Universal Precisionered Balls are globes of unbelievable accuracy . . . tolerances of ten-millionths of an inch, whether in a pellet as small as a mustard seed or as large as a marble.

For high speeds, silent operation, and minimal torsional resistance, use Universal Precisionered Balls of chrome or stainless steel.

Other Universal Balls in standard grades—chrome, stainless, bronze, solar aluminum and special materials—100% inspected, individually gauged.

Universal Ball Co.

WILLOW GROVE
MONTGOMERY CO., PA.



Goes Places in Narrow Spaces

Revolator Go-Getter Powered Hand Truck permits maximum use of storage or productive areas. The compact model shown above is a Hi-Straddle Lift with fingertip control—fully automatic 200° turning arc—slight operator training. Let us know your problem and we'll help you solve it.

Write or Phone

REVOLATOR CO.

8711 Tonnele Avenue, North Bergen, N. J.
UNION 3-8120

Oil Men Heat Up

Independents, hard hit by bulging stocks, production cutbacks, are up in arms demanding import cuts.

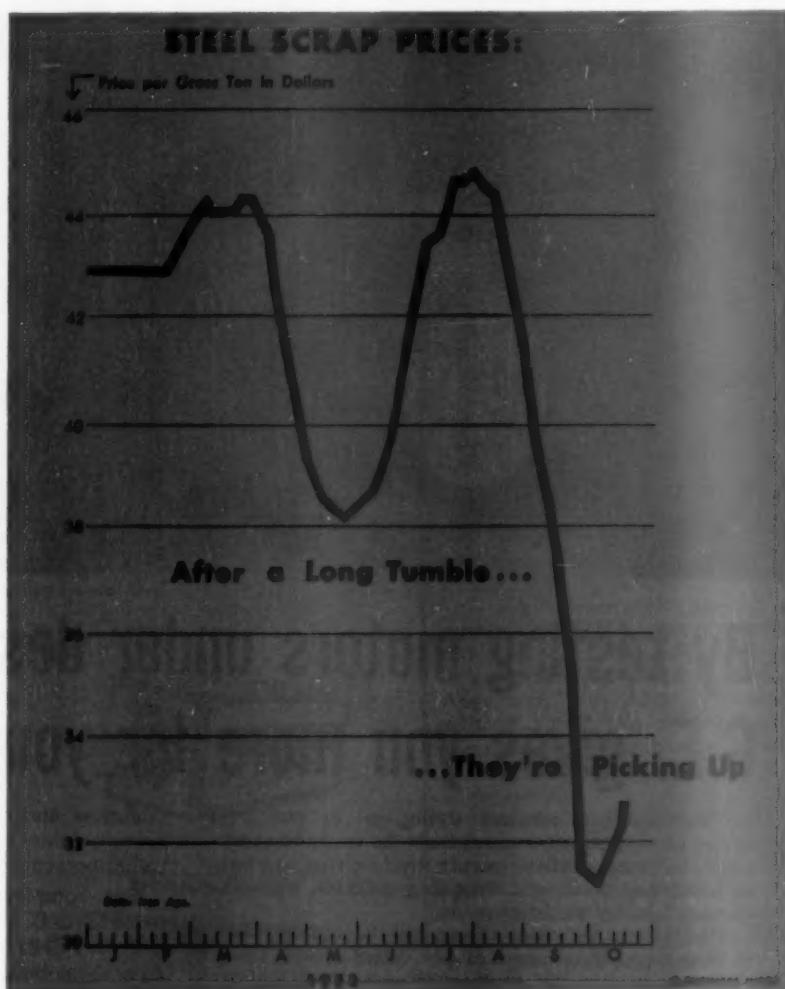
Independent oil producers are at the boiling point. And they make no bones about blaming high oil imports for most of their troubles.

Here is the problem: Inventories of crude oil and most refined products are still too high (BW—Sep. 19'53, p32).

So refiners have cut back production and the various state conservation agencies have made fairly hefty cuts in crude oil allowables (the amount oil men are allowed to take out of the ground).

• Hard Hit—These cuts have hit most of the independents pretty hard. Since August, six oil-producing states have cut back allowables some 600,000 barrels a day. And 600,000 barrels a day means a loss of over \$1.5-million a day to the industry as a whole.

An additional problem is that cutting allowables means not only that the oil man produces less, but also that fixed costs have to be spread over the smaller number of barrels produced. And with



An End to 1953's Second Big Skid

Everyone breathed a lot easier around the middle of October when steel scrap prices started moving up again. The 10-week-old skid had brought prices to their lowest level in over three years.

The drop had been the second sharp one this year. Prices started a seven-week tumble at the end of March,

then sailed right up again to hit a new high for the year. The main reason for the drop at that time, as well as the more recent one, was steel mill caginess about buying in advance of current needs. As soon as the mills show signs of returning to the market, prices move up again.



The Factory That Folded in a Week

Careers were short in this Greek Fire factory. They only processed this mix of pitch, quicklime and naphtha when a battle was brewing. And a week's batch was all a war needed. Almost any old vat would last a week.

In today's processing, of course—where one failure can numb your entire plant—standards are different. A breakdown doesn't just shut off one tank or pressure vessel. Schedules . . . volume . . . profit—all take a beating. That's why it's simple

insurance for any process to specify qualified fabrication to begin with.

Qualified fabricators work *with* you . . . with your engineers, designers, consultants . . . and with materials suppliers at their own end. This teamwork puts specialists on each phase of your equipment investment. Coupled with a qualified builder's own resources, such teamwork delivers equipment you can depend on. Be sure of the performance you pay for. Specify qualified fabrication.

Early in your planning of new process equipment, it will pay you to discuss your needs with your fabricator. Or, for the names of qualified equipment builders who are experienced in your field, contact us. As a materials supplier for over 140 years, Lukens knows fabricators. Address Manager, Marketing Service, 483 Lukens Building, Coatesville, Pennsylvania.

LUKENS

World's Leading Producer of

SPECIALTY STEEL PLATE • PLATE SHAPES • HEADS • CLAD STEELS

LUKENS STEEL COMPANY, COATESVILLE, PA.

How an industry leader prepares for a shifting economy:



**SEE WHAT'S BEHIND
RAYONIER'S
CONFIDENCE IN
A GROWTH FUTURE**

Rayonier produces chemical cellulose. As the framework of all vegetable matter, cellulose is a chemical which makes up nearly 68% of the composition of trees, shrubs, vegetables and grass. Cellulose is a polymer, meaning its molecules are linked together into long chains of identical groups. One ounce of cellulose contains over 142 million chemical fibers!

Rayonier uses trees—the most economical source—for its raw material. To obtain chemical cellulose, Rayonier chips trees into small fragments, which are subjected to involved and critical chemical processes necessitating banks of heavy chemical equipment and a force of highly skilled technicians.

Rayonier's finished product—chemical cellulose—is a white fibrous substance containing unique chemical properties which are basic to many major industries.

Chemical cellulose is the cheapest polymer. One way Rayonier has prepared to bridge shifting economic cycles is through constant development of even more adaptable chemical cellulose, to assure increasing demand for cellulose, no matter what happens to other chemical raw materials.

Rayonier's chemical cellulose as an industrial raw material is as versatile as it is inexpensive. Treat a Rayonier cellulose with other chemicals and a rayon or acetate fiber is created. Treat another Rayonier cellulose chemically, and cellophane, extruded plastics, or a new edible gum for food thickening are produced. Process Rayonier cellulose in a special fashion and this flexible chemical is transformed into synthetic sponges or smokeless powder.

Since 1930 when Rayonier first derived high quality cellulose from wood, the cost of cellulose has remained competitive, its quality improved and its usefulness firmly established. Experimental products of that time are multi-million dollar industries today. Thus, in 1952 Rayonier produced 408,399 tons for young industries such as tire cord, cellophane, plastics, man-made fibers, film, and other synthetics.

At Rayonier's Research Division, continuous scientific investigation for improved cellulose and new end uses helps cushion Rayonier against a shift in the domestic economy. Such Rayonier Research results in new and better low-cost products for more and more people.

The possible shift from an economy of scarcity to one of surplus in the U. S. A., and the transition from an inflated economy to sounder money and business are no great worry to Rayonier. While Rayonier observes a policy of maintaining capacity to meet customers' maximum requirements for high grade chemical cellulose, inventories are controlled because production is scaled to current needs—nearly 197,000 tons for the first 6 months of 1953.

After 26 successful pioneering years, Rayonier has several built-in resources and shock absorbers. Here are the more salient: an ability to diversify production and product; industry leadership to meet competition in chemical cellulose; a significant lead in the new field of silvichemistry; advanced research and development; 3950 skilled employees; assets totalling over \$111 million; an almost completed \$80 million expansion program including a new plant at Jesup, Ga., which will produce cellulose qualities hitherto unavailable. This plant is scheduled to start production early in 1954 with an annual capacity of 87,000 tons which can be doubled as world demand for chemical cellulose increases.



Rayonier's woodlands assure continuing raw material supplies for chemical cellulose. 802,500 acres are already developed in the Northwest and Southeast.

To doubly insure sufficient wood for tomorrow's greater cellulose requirements, Rayonier encourages a new, profitable enterprise: private tree farming for cellulose. Last Spring, Rayonier dispatched special company-owned mechanical tree-planting equipment through Georgia and Florida to help private landowners plant some 650,000 pine seedlings.

At the same time Rayonier's Forestry Division planted more than 2,200,000 slash pine seedlings on Rayonier land in the Southeast alone. Such carefully planned and executed land management helps protect Rayonier's future by spreading the responsibility for supplying the vital raw material for cellulose.

These company activities represent a strong protective investment in the economy of the Southeast, both for Rayonier and for private landowners engaged in growing soft-wood trees for chemical cellulose production. Here, too, is a valuable bulwark against a shifting economy.

Short-term demand for Rayonier chemical cellulose is firm. Industry projections show free-world productive capacity for cellulose by 1955 at 3,100,000 tons. Cellulose customers place maximum 1955 consumption at 3,700,000 tons. All converters are not always at full capacity at one time. This equalizing factor puts the industry in an essential balance.

Longer-term outlook for Rayonier is good. Use of high tenacity cellulose cord in truck and auto tires and demand for cellophane continue to grow. Other U. S. A. needs climb as new cellulosics are introduced.

Broader markets for Rayonier are seen as living standards of the free world improve. While U.S.A. consumes annually over 7 lbs. of cellulosic fibers per capita, the 2 billion free people outside use less than 1 lb. each. An increase of only 1 lb. per capita consumption in the free world outside U. S. A. will require a 33 1/3% increase in world chemical cellulose capacity. Rayonier is preparing for this increased demand.

Thus, to the fullest extent that management, resources and money can provide protections against shifts in the economy, Rayonier is safeguarded for the future.

**RAYONIER
INCORPORATED**

cellulose chemistry

Executive and General Sales Offices:
161 East 42nd Street, New York 17, N. Y.

AMERICAN BLOWER

Centrifugal Compressors



American Blower Centrifugal Compressors offer outstanding design features which improve efficiency, facilitate installation and minimize maintenance.

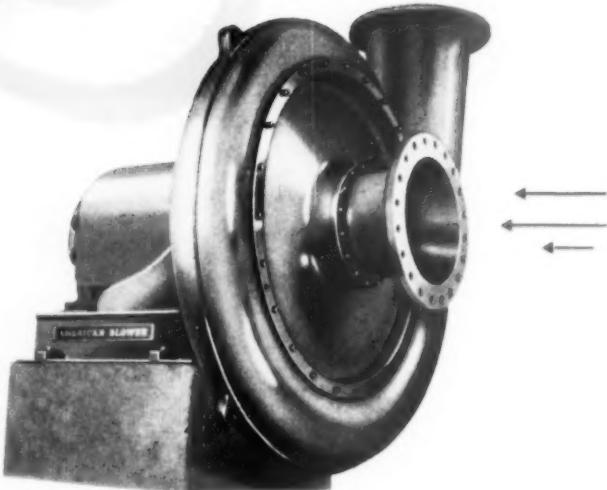
In the cutaway view, above: (1) Improved, scroll-shaped, casing design increases compressor efficiency. (2) Unobstructed diffuser passage efficiently converts velocity energy into pressure. (3) Annulus packing, having machined labyrinth, minimizes recirculation of gas around the impeller inlet. (4) Removable inlet nozzle. (5) Aerodynamic design of impeller blades results in high efficiencies. (6) Welded-steel baseplate "stress relieved" prior to machining, assuring maintained alignment.

For data, ask our nearest branch office.

AMERICAN BLOWER CORPORATION, DETROIT 32, MICHIGAN
CANADIAN SIROCCO COMPANY, LTD., WINDSOR, ONTARIO

Division of AMERICAN RADIATOR & Standard Sanitary CORPORATION

AMERICAN  **BLOWER**
YOUR BEST BUY IN AIR HANDLING EQUIPMENT



American Blower Single Stage Centrifugal Compressors are available in sizes 30 to 600 h.p., and pressures 1 $\frac{1}{4}$ to 3 $\frac{3}{4}$ lbs.

Serving home and industry

AMERICAN-STANDARD • AMERICAN BLOWER • CHURCH SEATS & WALL TILE • DETROIT CONTROLS • KEWANEE BOILERS • ROSS EXCHANGERS

the oversupply hanging heavy on the market, some think the early summer price boost on crude oil won't stick.

The big question, of course, is whether the cuts in crude allowables and in refining will bring inventories back to normal. Even with the cutbacks, production is still running somewhat above current consumption. The industry hopes, though, that rising winter heating demand will take care of that.

• **Up in Arms**—With their own production being cut back, domestic producers are once again up in arms about imports, now running just under 1-million barrels a day. At the recent annual meeting of the Independent Petroleum Assn. of America, outgoing president Charlton Lyons blamed imports as the principal cause for present excessive inventories (BW—Oct. 24'53, p18).

And the IPAA, whose members produce about 40% of the country's oil, passed a resolution, stating that unless importing oil firms voluntarily cut the amount of oil they brought in, legislation would be sought to limit imports to 10% of domestic demand. Using present demand figures, this would amount to roughly 800,000 barrels a day.

• **Question Mark**—Whether the domestic producers can ever get Congress to pass such legislation is the jackpot question. They tried hard to do it in the last session, and weren't successful. But it might be different this time—especially if crude oil prices should break.

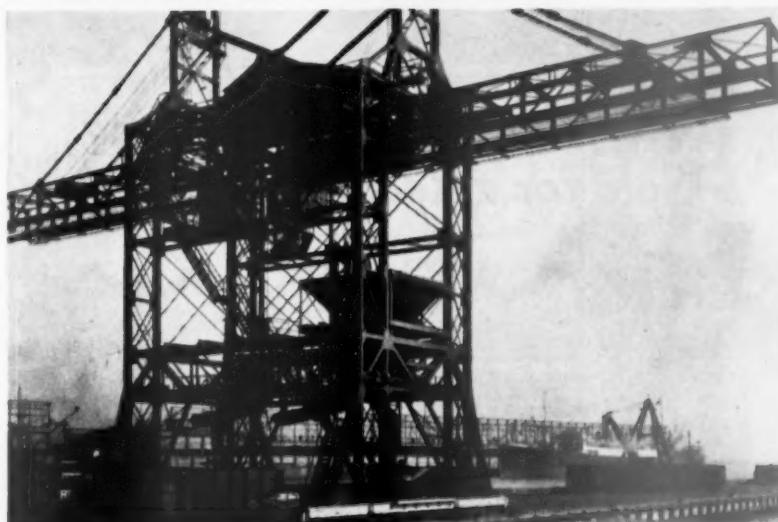
COMMODITIES BRIEFS

Copper prices surprise everyone by staying up. Many feel that a major factor in keeping the market intact is uncertainty over the long-negotiated U.S.-Chilean deal. Chile's substantial stocks of copper can exert little pressure on the market as long as Chile insists on getting a price far above the open market.

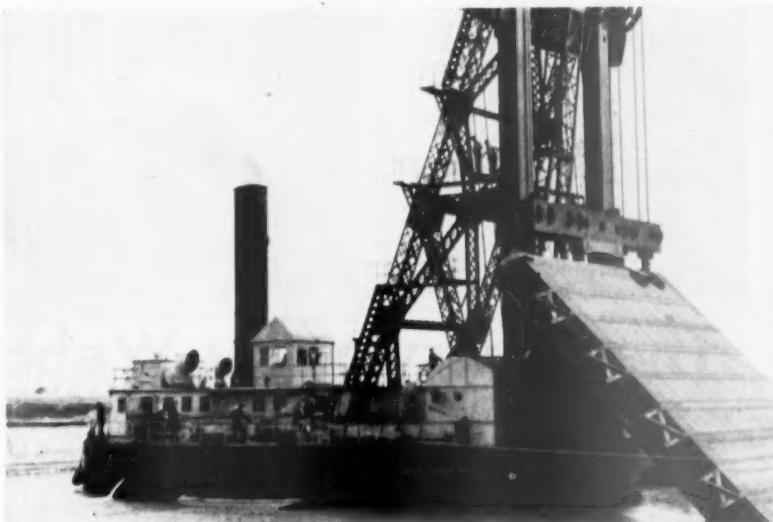
The Defense Materials System will be continued for steel, copper, and aluminum. Purpose: to assure supplies of the three metals for direct defense needs, and to keep track of just what those needs are. However, after the first of the year, much of the paper work involved in reporting requirements will be eliminated.

Off the controls list: Business and Defense Services Administration announced that, starting Nov. 1, controls on the use of columbium and columbium-tantalum are revoked. BSDA officials said that supplies of the alloy metals substantially exceed demand, and that military requirements have been reduced.

MATERIALS HANDLING BRIEFS



Ore boats at Eastern port are unloaded speedily by Wellman Bulk Cargo Handling Crane. Bucket takes 9-ton bites, dumps into hopper then through chutes to cars. Entire unit travels on tracks to cover the large area of the ore pier.



Davy Jones' locker is used as a storeroom for extra gate sections on the Welland Canal. When gates are needed, Wellman 500-ton Gate Lifter hoists heavy sections from the bottom, places them in position.

• Take advantage of Wellman's half century of experience to help speed your materials handling and cut your costs. The Wellman Engineering Company, 7000 Central Ave., Cleveland 4, Ohio, U.S.A.

Wellman will build it!

WELLMAN
ENGINEERING COMPANY-CLEVELAND

HEAVY MATERIALS HANDLING EQUIPMENT
SPECIAL STEEL MILL MACHINERY
"WILLIAMS" CLAMSHELL BUCKETS
MECHANICAL GAS PRODUCERS
"ANKER-HOLTH" AIR AND HYDRAULIC CYLINDERS

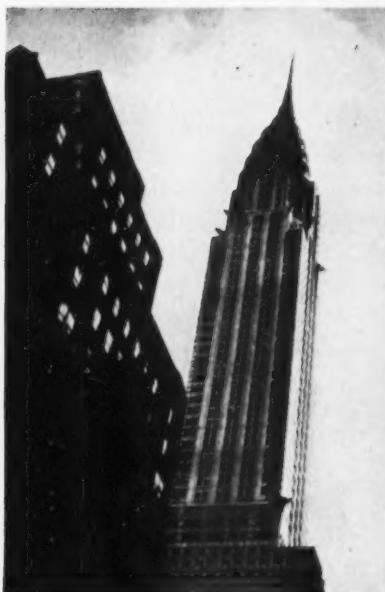
COMPANIES

Continued on Page 2, Column

on Page 3, Column

Chrysler, Graybar Buildings Sold for a Record 52 Million

By JOHN A. BRADLEY



The Newsworthy Webb & Knapp: Real

On Sept. 25 the New York Times broke the news that the biggest office building in the world would be built, at an estimated cost of \$100-million, over the Pennsylvania RR's tracks in New York City. The builder: Webb & Knapp, Inc.

On Oct. 7 the building that houses James McCreery & Co., New York department store, was sold for \$7-million—to Webb & Knapp.

On Oct. 9 three major New York office buildings—the Chrysler Building, the Chrysler Building East, and the Graybar Building—were acquired at a total cost of over \$52-million, by Webb & Knapp.

• **The Captain**—To some businessmen, the immediate reaction was a question: Who is Webb & Knapp? Many knew the answer to that one, but they had another: What is there about Webb & Knapp that makes virtually every deal it swings rate headlines?

A single answer fits both questions: William Zeckendorf.

William Zeckendorf is a big (6 ft., 250 lb.), balding, round-faced, genial man of 48. He's Webb & Knapp's president and controlling stockholder, with 9-million-odd voting shares out of 21-million-odd. He joined the company in 1938; in 1942 he became chief executive officer, a job he has held ever since. And the fact that W&K is a far different animal today than it was in 1942 is not a coincidence.

• **Change**—In 1942 W&K was primarily a real estate management and consulting firm, doing some brokerage on the side. Its net worth in the middle of that year was \$127,000 in red ink. Today, Webb & Knapp is out of consulting and brokerage altogether; it operates entirely as a principal in real estate transactions. Its net worth as of last Dec. 31 was \$21½-million—black ink. Its net liquidating value (consider-

ing its properties at actual value rather than book value) is in the neighborhood of \$60-million.

W&K owns or controls properties worth perhaps \$200-million to \$250-million today. Among them: the Chrysler and Graybar Buildings and McCreery's, the Airlines Terminal in New York, the shopping center in Levittown, N. Y., the former Charlie Chaplin film studios in Hollywood, 12,000 undeveloped acres within the city limits of Los Angeles, 67,500 acres of Florida sand and muck lands that it is busily reclaiming as farm land, a 60% interest in a former airport turned industrial development, a railroad in Hoboken, N. J., four oceangoing tankers—and a post office next to the building in which BUSINESS WEEK has its offices.

In addition, W&K has in construction today, for its own account, almost \$15-million worth of buildings in

Continued on Page 28, Column 4 continued on Page 43

Huge 9th Ave. Mart Planned As 'Showcase' of U.S. Goods

By LEE E. COOPER



Estate Plus Imagination

Denver, a like amount on 34th Street in Manhattan, and \$10-million worth in San Diego. And the \$100-million merchandise mart over the Pennsy tracks in New York is coming up.

• **The Middle Step**—Why has Webb & Knapp grown so great? Primarily because it adds something extra to the conventional real estate operating pattern. The something extra, contributed largely by Zeckendorf, is imagination.

The conventional pattern is to buy a property, hang onto it for a while, and then resell it. If the market is favorable, you make a small profit. If you're lucky, you may make a big profit. But that kind of watching-and-waiting game is not for Webb & Knapp. When Zeckendorf's company buys a property, it buys with a view to changing the property, increasing its value independently of fluctuations in the market.

"When Bill Zeckendorf looks at a piece of property," says one of his asso-

ciates, "he doesn't think of it in terms of its present value, but of its potential. He may be able to increase that value manyfold just by adding an idea, which costs nothing. If he can't see some way to increase its value, if he can't create an increment, create new values, he simply isn't interested."

• **Ways and Means**—This creation of values can take many forms, depending on the property involved. In a recent talk to the New York Society of Security Analysts, Zeckendorf mentioned a few of them: "Retenanting, rebuilding, reconception of the use of space, demolishing and new construction, refinancing . . ." W&K has used all of these many times.

Take retenanting, for instance. Some years ago, Webb & Knapp bought the Terminal Warehouse property on New York's lower West Side. It included 25 adjoining buildings with a total of something over 1-million sq. ft. of floor



A.W.Q.
means
BUSINESS!

Out in our shop A.W.Q. is the symbol of American Welding Quality. It is serious business to 800 craftsmen who make your welded product their personal concern.

A.W.Q. is a constant reminder to these men, skilled in the art of forming, welding and machining, that you expect every ring, every band, every assembly to be handled with the same care exercised in your own plant.

Why not put this up-to-date, well equipped plant to work for you. Draw upon our 35 years of experience. Most important, be assured of an organization that makes quality welded products their business.

Call your local American Welding representative. There's a branch office nearby.

A Company you'll like to deal with



THE AMERICAN WELDING
& MANUFACTURING CO.

380 DIETZ ROAD • WARREN, OHIO

CUT COSTS with

T
WEBSTER ELECTRIC
Teletalk
INTERCOMMUNICATION



• One sure way to reduce overhead in your business is to stop needless running around between offices and departments—the waste of time and human energy—with Teletalk, the finest in intercommunication for nearly twenty years.

• Simply flip a key and make instant two-way, voice-to-voice contact with other executives. Teletalk is always ready—always dependable. It offers exceptional fidelity and clarity of voice transmission . . . trouble-free operation for years to come!

• Ask your dealer about the new Teletalk and the benefit it can bring to your business. Mail the coupon today for new illustrated Teletalk booklet, "Costs Drop."

WEBSTER RACINE **ELECTRIC** WISCONSIN

"Where Quality is a Responsibility
and Fair Dealing an Obligation"
WEBSTER ELECTRIC CO., RACINE, WIS. • EST. 1909

Webster Electric Company, Dept. BW-10
Racine, Wisconsin
Please send me Teletalk booklet,
"Costs Drop."

Name _____
Address _____
City _____ Zone _____ State _____

". . . he simply said to himself: 'There are no slaughterhouses' . . ."

WEBB & KNAPP starts on p. 130

space. It was leased out mostly to small companies for short-term storage or warehousing of goods. There was very little continuity, no predictability to the business.

When W&K took over, it set out methodically to change the nature of the business. As space became vacant, it was held that way instead of being let out again. When enough vacant space was accumulated, W&K rebuilt, tore down partitions, broke through walls of adjoining buildings, installed high-speed elevators. Eventually, it had available for lease huge open areas in fairly modern buildings. And it leased this space, on long-term contracts, to such large users of warehouse space as R. H. Macy and John Wanamaker; Seagram, Schenley, and Canada Dry; the U. S. Government Printing Office.

Obviously, when most of a warehouse's space is occupied on long-term lease by such "100%" tenants, instead of on a catch-as-catch-can basis by unknowns, the value of the property is far greater. It proved to be when Webb & Knapp sold a few years later.

• **Horses and TV**—Or take reconception of the use of space. A few years ago Zeckendorf was offered a riding academy near New York's Central Park, for \$700,000. Since he had no interest in operating a riding academy, his immediate reaction was to turn it down. Then he decided he at least ought to look at it first. He was immediately struck by the size of the main riding arena; it was 92 ft. by 200 ft., with a high, vaulted ceiling and no interior columns. The key point is that when he looked at it, he didn't see a riding arena; he saw a television studio.

So he bought it. And offered it to every broadcasting company in the city, with no takers. So for nearly a year, Webb & Knapp operated a riding academy—at an average monthly loss of around \$4,000. Finally American Broadcasting Co. took a look at it, decided Zeckendorf was right about its being ideal for a TV studio, and bought it. Zeckendorf's profit—due solely to his ability to see more than meets the eye—was \$600,000.

• **No Slaughterhouses**—Or take demolishing. For years New York's streets in the east 40s were made unsavory by a group of slaughterhouses lying between First Ave. and the East River. In 1946 a broker approached Zeckendorf, offered him the entire group as a unit at a price of \$17 a square foot of land. Observers may have thought the figure outland-

ishly high; other property in the neighborhood was going begging at \$5 a square foot and even less.

But to Zeckendorf, the \$17 figure seemed the greatest bargain he had ever seen. He simply said to himself: "There are no slaughterhouses." And, immediately, the land wasn't worth \$5 and it wasn't worth \$17. It was worth \$50—because the existence of the slaughterhouses and their stench had been the only thing holding back eastward expansion of the fabulously valuable Grand Central business district.

So Webb & Knapp bought the \$17 land, and the \$5 land. Once it was all assembled, Zeckendorf estimates now, it was worth about \$35-million. He drew up plans for a fabulous \$150-million development, to include a convention hall, an opera house, a concert auditorium, a huge hotel, an even huger office building, and so on.

But a few months later, in December, Zeckendorf read in the paper that the United Nations were about to set up headquarters in Philadelphia because they could not get a site in or near New York. Within a week Zeckendorf had sold some two-thirds of the property to the U. N. for \$84-million—which the U. N. got as a gift from John D. Rockefeller, Jr. Webb & Knapp made about \$2-million on the deal—chicken feed compared with what it could have made if it had developed the land itself.

• **Mortgage**—Or take financing. The \$52-million Chrysler-Graybar deal was possible only because Webb & Knapp, in a very bad mortgage market, was able to get a \$40-million mortgage commitment from the Equitable Life Assurance Society. Equitable already had a \$12½-million mortgage on the Chrysler Building East. It also held \$27½-million face value of 2½% notes of CIT Financial Corp., which were worth a little under par in the open market at the time.

To get the added \$27½-million mortgage he needed, over and above the existing \$12½-million mortgage, Zeckendorf agreed to take the CIT notes at par in exchange. An exchange of a 2½% investment for a 4½% investment, with a premium to boot, looked like a good deal from Equitable's point of view. And the small loss Webb & Knapp had to take when it cashed in the CIT notes at the market was an insignificant price to pay for assuring the financing on so large a deal.

The very size of deals such as these is one reason why they regularly hit the headlines. But there's another reason, too—slightly more obscure, but equally important: The deals are unusual. "We have no interest in deals where we can easily see the end of the road," is the way Zeckendorf puts it. "What we are always looking for is deals where the end of the road is not in sight. Deals like those have limitless potential but a very

limited market. And deals like those are always newsworthy."

• **New Coordination**—This desire to blaze new trails has led Zeckendorf into a whole new philosophy of real estate. He feels that there has never been any real coordination between architecture and the economics of real estate. An architect who doesn't understand the economics of the buildings he designs, Zeckendorf told the students at the Harvard University School of Design a year or so ago, "is no architect; he's an academician." And by the same token, he said, builders who build with no consideration except price, with no thought of the effect they're having on the neighbors or neighborhood, pose serious threats to the long-term economic structure of their communities.

He foresees a day when the skills of the builder and the artist will be completely integrated, so that all buildings will be at once beautiful and functional, and economically sound. And to bring this day a little closer, in 1949 he set up a separate department of architecture within Webb & Knapp. A big part of the department's job, of course, is to design buildings for current Webb & Knapp projects. But Zeckendorf has enough faith in his dream to carry it a step further; he also gives the department its head to do architectural research on totally new concepts in design, with no immediate application or hope of financial return.

One idea that has come out of this setup is the Helix—an apartment house built in the shape of a spiral, with all utilities, plumbing, elevators built into a central core, and the apartments themselves in arms radiating out from it. Zeckendorf has picked what he considers the ideal site for the first Helix—the top of Nob Hill, in San Francisco. But so far, difficulty in persuading anyone to finance the completely unorthodox structure has kept him from starting it.

Another project the W&K architects are working on is a parking garage designed for crowded metropolitan areas. Zeckendorf contends that it's impossible to solve the parking problem of central-city areas horizontally, because the land is simply too expensive. He is convinced that vertical parking buildings are the only answer—and W&K has already spent well over \$500,000 on research in cooperation with Otis Elevator Co., trying to develop a design for a completely automatic vertical parking garage.

• **Adventurers**—Obviously, it takes a team of first-class real estate specialists to run a company like Webb & Knapp. And everyone in Webb & Knapp shares Zeckendorf's feeling for the unconventional, his love for the road whose end is not in sight. Yet no one in the or-

ganization has any illusions about who is the big man in Webb & Knapp. During the last half of 1952, Zeckendorf received salary and year-end bonuses from the company totaling \$120,000, in addition to a Zeckendorf-sized expense account. The next-highest-paid officer got only \$21,300 in the same six-month period. W&K carries in the neighborhood of \$1.6-million of insurance on Zeckendorf's life—"and it's not nearly enough, considering his value to the company," says one of W&K's top officers.

Much of Webb & Knapp's phenomenal growth over the past 11 years, Zeckendorf admits freely, is due to the fact that the company "has been part of a great upward move." Bill is an extreme optimist," says one of his friends. "So far he has been an extreme optimist at the right time."

What if the times change? Zeckendorf is convinced he'll still make out all right. In the first place, he's sure that if there should be only a mild depression, real estate won't feel it at all. And even in the event of a serious depression, he says, he feels W&K will be agile enough to escape any really serious harm. "We'll always be a little better off than the rest of them," he says. "We can accelerate a flood tide a little better, and we can resist an ebb tide a little better. That's the difference between the men and the boys in this business."

COMPANIES BRIEFS

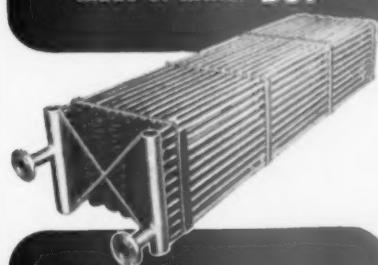
Pittsburgh Steel Co. moved nearer to completion of its \$62.8-million expansion program (BW-Jul.25'53,p76) with operation of six new soaking pits at the Monessen (Pa.) plant. This makes 12 new furnaces completed out of 15 planned. The three others are due early in 1954.

Roy Fruehauf, president of Fruehauf Trailer Co., and others acquired a 15% interest—65,200 shares—in Detroit & Cleveland Navigation Co., an investment company. Last summer, George Kolowich, head of D&C, bought 130,000 shares in Fruehauf (BW-Aug.8'53, p138). In the newer deal, the Fruehaufs bought D&C shares from Alleghany Corp. at an undisclosed price.

Caterpillar Tractor Co. will lay off 2,000 workers at its Peoria plant, starting in mid-November. Employment is still high, though 2,262 employees have already been lopped off or not replaced since Sept. 1; the Peoria force now stands at 23,750. President L. B. Neumiller said the company is going ahead with expansion plans (BW-Aug.15'53, p56).

**Maybe you don't need a coil
with a half mile of pipe**

**Maybe you don't need a coil
made of nickel--BUT**



WALLACE OFFERS A COMPLETE PIPE AND TUBE Fabricating Service

• Don't let that next pipe or tubing bending requirement become a problem or over costly. Wallace assures quality and economy because of its 53 years of experience—its modern and extensive facilities—and its warehouse fully stocked with pipe, tube, and fittings in stainless as well as other metals.

• Wallace does the complete fabricating job, including bending, welding, drilling, flaring, swaging, punching, and assembly. Hundreds of standard dies are maintained to meet practically every need. The job is shipped to you ready for installation.

• Simply send prints—or just a rough sketch of what you want. Our engineers will gladly study, recommend and estimate your needs wherever we think we can be of benefit. Plants in Chicago, Illinois and Bryson City, North Carolina.

WALLACE TUBE COMPANY

Dept. BW • 1312 Diversey Pkwy.
Chicago 14, Illinois



BUSINESS ABROAD



BARBED WIRE barricades split Jerusalem, focus of Arab-Israeli hatreds. This week troops are moving on both sides of frontier.



PROBLEMS Border warfare, like the recent massacre of Arabs at Kibya, is behind new flare-up; there has been . . .



STAKE Jordan River development scheme could be basis for Arab-Jewish economic cooperation, TVA-style . . .



... continuing violence by Arab and Jew along the truce lines ...



... Another sore point is the plight of some 800,000 Arab refugees, driven from their homes in Palestine during Arab-Israeli war. Many are near starvation now.

New U.S. Policy for an Old War



... But Israelis are going ahead with their own irrigation-power plan, and using Jordan water contrary to orders of United Nations. They insist Arabs will never cooperate.

Three years of hot war in Asia and cold war in Europe pushed the private Arab-Israeli war out of the headlines and into the history books. Sporadic violence along the 1949 armistice line passed almost unnoticed.

Then, on Oct. 14, Israeli irregular forces sacked the Jordanian village of Kibya, massacring some 60 Arabs. This week troops are on the move all along Israel's frontier. Jordanian columns are reported massing in divided Jerusalem. Saboteurs are active. An Israeli train was blasted, pipe and power lines cut. Harsh words are flying at the United Nations Security Council in New York.

• **Repercussions**—Once again, the free world is hip-deep in the Palestine question, with repercussions being felt throughout the Middle East.

This time, there's a big new factor in the old setting—a radical shift in U.S. Middle Eastern policy. Secretary of State John Foster Dulles is making a determined effort to ease the Israeli-Arab hatred and fear that has kept the strategic oil-rich Middle East prostrate.

Dulles' object is to calm Arab fears of Jewish aggressiveness and to subdue suspicions of Western imperialist intentions by strict, even ostentatious, political impartiality towards Israel. He hopes that over a period of years this may woo the Arabs toward active

G
GLOBE-WERNICKE

ENGINEERED WAYS TO BETTER BUSINESS

Section of Cummins-Chicago General Offices; note partitioned privacy — efficient use of space.

TECHNIPLAN

ORIGINAL MODULAR OFFICES DELIVER

4 GAINS TO CUMMINS-CHICAGO CORP.

"FOUR WAYS BETTER" say the executives of Cummins-Chicago Corporation of their complete G/W Techniplan offices, "with solutions to specific problems:

- 1 25% more workers in the same space without crowding.
- 2 Workers are very happy with the added privacy—working comfort.
- 3 Work output is materially increased without pressure.
- 4 Changes—rearrangements—are easily, quickly made."



Departmental group of Techniplan work stations.

SATISFIED USERS by the hundreds, in all parts of the country, report similar experiences with TECHNIPLAN interlocking and interchangeable office units—capable of innumerable groupings and arrangements.

CUSTOM-FITTED work facilities provide top efficiency for every kind of office job—standard and interchangeable units—are readily changed at will.

FREE STANDING PARTITIONS now adapt TECHNIPLAN equipment for private offices, executive suites, and departmental sections. These are available in two heights, with panels of steel, or various kinds of clear or decorative glass.

MODERN IN DESIGN, TECHNIPLAN makes very attractive offices and promotes orderliness which enhances office appearance.

YOU CAN SEE Techniplan installations near you; simply ask your Globe-Wernicke dealer for information. He will show and demonstrate Techniplan. Find him listed in classified 'phone book under "Office Equipment."

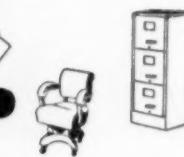


THIS FREE BOOK
will be sent
promptly upon
request, on
business letterhead
please, to
Dept. 11-B.



GLOBE-WERNICKE

Engineering Specialists in
Office Equipment, Systems
and Visible Records



Cincinnati 12, Ohio

economic and military cooperation with Israel—and with the West.

To be sure, the U.S. is not throwing Israel overboard. As excited Zionists are quick to point out, the U.S. can't slough off its historical responsibility for Israel's creation.

So the Dulles policy, while retaining the basic orientation established at Israel's founding in 1947, is taking on a new emphasis—away from the appearance of being pro-Israeli.

- **Moves**—You can see this in current developments. The U.S. has:

- Cold-shouldered informal Israeli inquiries about a \$75-million Export-Import Bank loan.

- Deferred scheduled payment to Israel of a \$20-million-odd slice of economic aid. The official reason: Israel's refusal to obey a U.N. order to stop work on a Jordan River hydroelectric project in the demilitarized zone between Syria and Israel (picture, page 135).

- Pared economic aid to Israel from roughly \$75-million in the fiscal year that ended last June 30 to \$60-million this year. The Administration also persuaded Congress to lump Israeli aid in with appropriations for the Middle East as a whole. This leaves it up to the Administration to slice the pie, giving it an economic club to wave at Israel.

- Denounced the Israeli attack on Kibya in one of the strongest official notes ever delivered to a friendly power.

All these actions were designed to convince Arab nations that the U.S. will play no favorites in the Middle East. But the fact remains that there are strict limits on the impartiality that Washington can display in the Middle East.

For one thing, the U.S. can't give the Arab nations economic aid on a par with Israel. Having helped to bring Israel into the world, the U.S. can't renege on the corollary obligation to keep it alive. To survive at all, Israel will need large transfusions of U.S. aid for years. It still is earning less than one-seventh of its foreign exchange through exports.

Then, too, Israel is a dynamic growing state, with a high level of technical competence. It can absorb almost unlimited amounts of investment capital. The more primitive, stagnant, Arab economies absorb aid with considerable difficulty.

- **Matter of Emphasis**—It just wouldn't make sense to dole out Middle Eastern aid on an even-steven basis. The shift in U.S. policy, therefore, is likely to be confined to diplomatic and political gestures. It will be a shift in emphasis, not of basic policy orientation.

But even this could upset the hair-trigger balance of power in the Middle

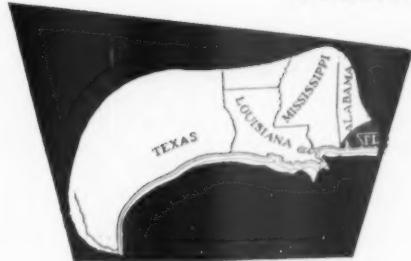


INVITATION TO INDUSTRY

... FROM THE ALABAMA - FLORIDA GULF COAST

There's a cordial welcome waiting for new industries in the vigorously progressive area around Mobile, in southern Alabama, and Pensacola, in northwestern Florida. Here you will find a made-to-order supply of skilled, cooperative workers . . . excellent plant sites with ready access to deep-water ports and inland waterways . . . diversified raw materials . . . and a year-round working climate. Here, too, your plant can enjoy the benefits of natural gas, which is available to industries and local distribution systems in the area from the pipe lines of United Gas, world's largest handler of this preferred industrial fuel.

Write our Industrial Development Division,
P. O. Box 1407, Shreveport, Louisiana.



One of a series of ads, now
in its 15th consecutive year,
describing the industrial ad-
vantages of the Gulf South.

Alabama-Florida Communities
Supplied with Natural Gas from
the Pipe Lines of United Gas

ALABAMA

ATMORE
BAY MINETTE
BREWTON
FAIRHOPE
FLOMATON
MOBILE

FLORIDA

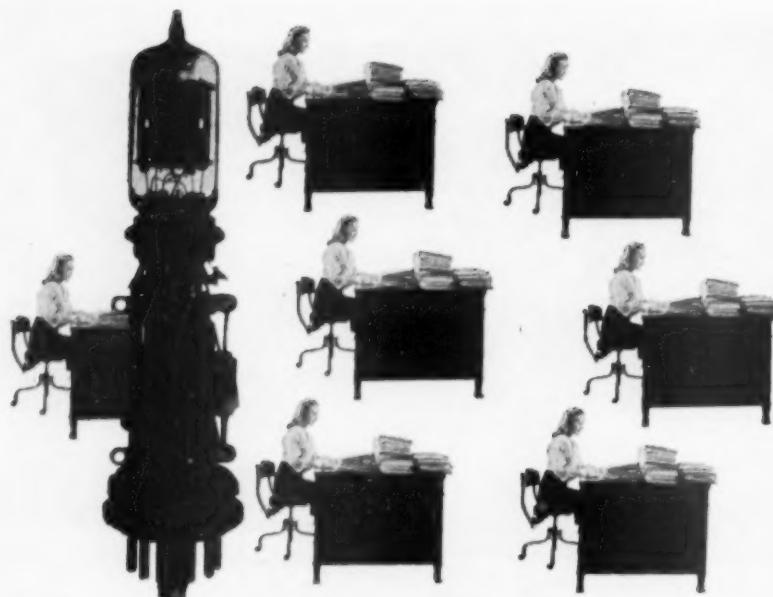
MILTON
PENSACOLA

UNITED GAS

SERVING THE

Gulf South

UNITED GAS CORPORATION • UNITED GAS PIPE LINE COMPANY • UNION PRODUCING COMPANY



Science tackles the problem of too many pieces of paper

New Ideas, New Methods Speed Data Processing for Business...

Business and Industry are facing an old problem that grows daily in cost and complexity. It's the data processing problem. Too many hands are processing too many pieces of paper.

Hundreds of banks manually handle more than 100,000 items daily. Insurance companies frequently handle policies more than 80 times before the first premium is received—and a medium-sized firm issues more than 3,000 policies per month. Department stores frequently handle charge accounts 100 times during a year.

The problem is even more complex for many giants of industry with far-flung branches. Invoicing, purchasing, cost control and other data functions add up to huge staffs processing pieces of paper by hand.

Telecomputing first faced the data processing problem in scientific and engineering work. It applied New Ideas to problems involving huge masses of data. It designed and manufactured New Instruments to read and record data at speeds many times faster than pencil-pushing. It developed New Methods of data routing and electronic communication.

Today Telecomputing is applying New Ideas and New Methods to accounting-communications data problems in Business—to help solve the problem of too many pieces of paper.

Turn hours into minutes with Telecomputing.

TELECOMPUTING CORPORATION

BURBANK, CALIFORNIA • WASHINGTON, D.C.

East with unforeseeable consequences.

- **Anger**—Israeli opinion already is burning with resentment over the new U.S. attitude. Officials are particularly angry about the abrupt halt of U.S. aid and the tone and timing of last week's U.S. note denouncing the Kibya raid.

They protest that the U.S. reaction to the Kibya raid completely ignored the long record of Arab incursions and made it appear as though all the blame lay on the Israeli side.

Then, also, Israel disputes Syria's claim that its Jordan hydroelectric project in the demilitarized zone below Lake Huleh violates the armistice terms. The Israeli government offered to suspend work on the project temporarily while the U.N. investigated the Syrian objections. Gen. Vagn Bennike, chief of the U.N. Palestine Truce Observation Commission, refused, insisting the project would have to be stopped unless Syrian permission could be obtained. But the Israelis are convinced the Syrians never would give the green light—simply because their whole policy was designed to weaken the Israeli economy.

- **Balance**—It's too early to tell whether the new U.S. policy will pay off. It could have serious political reactions in Israel. The present middle-of-the-road government there has based its whole policy on cooperation with the U.S. Extremists of the right and left, who have been plugging right along for military conquest of the rich Arab lands north and northeast of Israel, are bound to gain ground now.

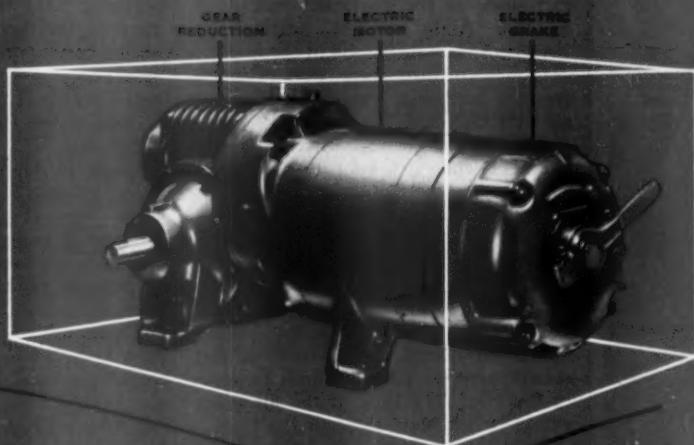
On the other hand, wooing Arab support in the cold war won't be easy. The Arabs so far aren't interested in the threat of communism. All their energies are absorbed by local feuds. They are as fearful of Western imperialism as of the Russian menace.

Beyond that, U.S. attempts to placate the Arabs could freeze their unwillingness to make peace with Israel. The Arabs may look upon the U.S. shift as a sign of weakness. They may even be emboldened to undertake new aggressive action against Israel.

- **Worth a Try**—Still, most U.S. officials familiar with the Middle East think the new policy is worth a try.

They believe that Arab fear of aggressive Israeli intentions is the major source of instability in the Middle East. Many Arab leaders see Israel as a shield behind which the Western powers are plotting to regain colonial control of the area. Since no military or economic cooperation is possible in the Middle East in the face of the implacable suspicion and hostility of its 40-million Arab inhabitants, the U.S. must try to convince the Arabs that it won't countenance Israeli expansionism.

Washington hopes that in time a policy of diplomatic toughness toward



Don't put up with make-shift assemblies when it is so easy to get the **RIGHT** horsepower, the **RIGHT** shaft speed, the **RIGHT** construction features, the **RIGHT** mounting . . . all combined into one compact, easy to use power package.

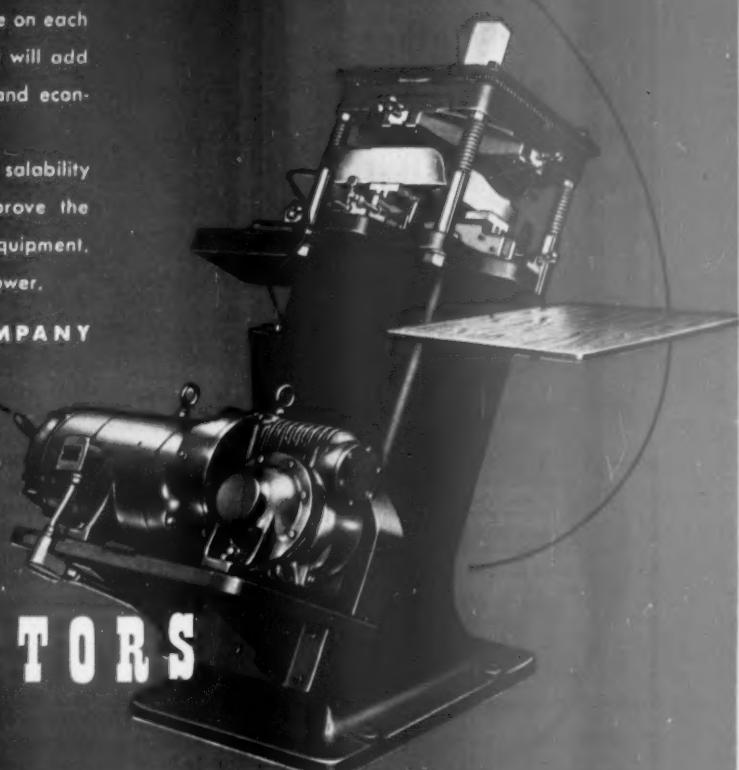
Master Gearmotors, available in thousands and thousands of combinations of types and ratings, permit you to use a power drive on each job that's just right . . . a power drive that will add greatly to the compactness, appearance, and economy of each of your applications.

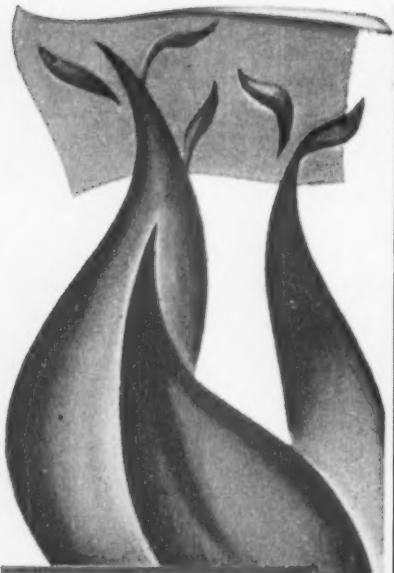
Use Master Gearmotors to increase the salability of your motor-driven products . . . improve the economy and productivity of your plant equipment. They're the horsesense way to use horsepower.

THE MASTER ELECTRIC COMPANY
DAYTON 1, OHIO

All in one package

MASTER
GEARMOTORS





MOSINEE
makes
*Flame
resistant
paper*
and many other
special-purpose
industrial papers
to do specific jobs!



What do you
want paper to
do for you?

MOSINEE
makes fibres work
for industry

Mail coupon for samples

Mosinee Paper Mills Co.
Dept. BW, Mosinee, Wis.

Please send samples of Mosinee Flame-resistant paper . . . for this end-use:

Name.....

Firm Name.....

Address.....

City & State.....

Israel will go a long way toward easing Arab suspicions. Then it might be possible to remove specific sources of conflict—such as the continual irritant of 800,000 Arab refugees huddled in wretched tent camps around the borders of Israel (picture, page 135)—through regional economic cooperation backed up with U.S. aid.

A first step in this direction came last week when Eric Johnston set off on a Middle East junket as President Eisenhower's special emissary (BW—Oct. 24 '53, p150) to sell a \$121-million scheme for joint development of the Jordan Valley along TVA lines (map). The project would provide irrigation water and electric power for Jordan, Syria, and Israel, and would permit resettlement of 200,000 Arab refugees in the area. The bulk of the financing would be funneled through the U.N.

The Israelis frequently have offered to negotiate with neighboring Arab

states on regional water development. So far the Arabs have stubbornly refused to negotiate with Israel about anything since they have never recognized the legitimacy of the Jewish state. Jordan turned down the U.N. project in advance. Eric Johnston also is getting a cold reception from other Arabs because of the charge that he was associated with U.S. Zionist organizations.

• **Snags in U.S.**—Dulles' new policy stress is also running into domestic snags. Several top politicians, to say nothing of many Zionist leaders, have expressed concern. There's bound to be a major political hassle when Congress reconvenes.

Dulles intends to stick to his guns as long as he can. He is convinced that something must be done to strengthen the Middle East. He's willing to take big risks both in Israel and on Capitol Hill to explore the possibilities of new U.S. policies in the Middle East.



New Power to Knit Central America

Opposition to Guatemala's pink-tinted government has brought the other four Central American republics together politically as never before. Now the \$25-million Lempa River hydroelectric project (picture) in El Salvador may bring the beginnings of economic cooperation in Middle America.

When it starts producing next March, the 45,000-kw. Lempa River station will be far and away the largest in Central America. The coffee-rich Salvadorean government is putting up the bulk of the cost, with a \$12.5-million assist from the World Bank. Tem-

porarily, at least, Lempa River will provide a power surplus for El Salvador.

There's hope that some of this power can be used elsewhere in the area. Officials of Costa Rica, Honduras, and Nicaragua are talking with Salvadoreans about a scheme whereby new power facilities can be built in the countries with the best hydro sites, then sold across the borders. Such a power pool could mean a big step up the economic ladder for the coffee and banana republics of Central America, already a \$200-million-plus market for U.S. goods.

BUSINESS ABROAD PATTERN

Guiana: No Royal Road to Freedom

THE CRISIS in British Guiana is subsiding, after its sudden, dramatic outburst (BW—Oct. 10 '53, p152). Last week the British government published a White Paper that made a strong case for the drastic action London felt obliged to take. The paper asserts that the People's Progressive Party government, after sweeping the colony's first election, was actively fomenting strikes, undermining the loyalty of the police, allowing free entry to Communists and their literature, intimidating the assembly at Georgetown. There was evidence of a plot to burn homes and businesses of Europeans.

Indeed, there is good reason to believe that the pro-Communist PPP aimed to set up a one-party, totalitarian regime in British Guiana. The House of Commons agreed, a little reluctantly, that the use of force was required. Now a commission will try to pick up the pieces, set Guiana once again on the road to self government.

TO MOST AMERICANS, the Guiana incident represents primarily the threat of communism in the Western Hemisphere. But for many other nations—Latin American, Asian, African, some of them supremely jealous of newly won independence—Guiana is more likely to stand out as an example of hated Western "colonialism."

This is unfortunate. For the truth is that Guiana is an example of a Western dilemma: how to bring dependent peoples safely and surely to self government and independence.

British Guiana's half-million population is an inflammable mixture of races. For the past few decades Britain has tried to move this group toward more and more independence, encouraging native leaders and administrators. It endeavored—perhaps too slowly, outsiders may remark—to push economic development so that the colony, a poor one, might better be able to survive.

Two years ago, London judged the time was at hand, and sat down with Guianese leaders to draft a constitution. Even at that time, there were signs that the dominant PPP wasn't talking about the same kind of democracy the British were.

Nonetheless, London went ahead—with the unhappy results outlined in the White Paper. Britain had to snatch back a constitution granted just a few months before. Its policy of encouraging self government got a black eye.

It may be that Britain moved too quickly to grant British Guiana its first measure of freedom. Yet all the pressures on the Crown were to go much faster.

STRONG-ARM MEASURES, sending ships and troops, weren't calculated to encourage democracy. What can be done, then, when in a democratic election the electorate votes in an undemocratic party? It's a dangerous principle, totalitarian itself, to say that the electorate was "ignorant and didn't know what it was doing."

It's a tricky business all around, and only history can give the final answer. In the meantime, even the most anticolonial liberals must realize that the granting of self government must be a flexible, patient process, while native leaders get the hang of government. The colonies, remarked the London Economist, are "on parole" until they get their sea legs. Another British observer states that granting a constitution is an "act of faith" on Britain's part. If that faith is abused or perverted Britons would become partners to the betrayal if they didn't act.

The margin of safety on the road to self government is always narrow. In India, the final exit of the Crown was marked by bloodshed. In South Africa freedom brought a half century of quiet cooperation; but today, there are serious racial problems and some South Africans are tampering with their constitution. Recently, in the Gold Coast colony of West Africa, a firm step toward self government brought the formation of a native African government without serious trouble.

MOST BRITONS are determined to continue the process. Their only hope of preserving some shadow of empire is to disengage successfully the dominions—as was done in India and Pakistan, where political and commercial relations are growing closer within the framework of the Commonwealth.



CAROL PORTABLE CORDS

are ideal teammates for any kind of movable or stationary machinery. They're built to take all the bending, pulling, twisting, abrasion and other rough treatment that shop equipment gets—and keep bringing electrical power wherever you need it.

Cords made by Carol Cable Division of The Crescent Co. come in standard and heavy duty types, with two to four conductors in a selection of sizes for moderate to heavy power capacity. All are manufactured in an up-to-date complete plant, which encompasses all phases of wire making from drawing of wire to compounding of insulation. Strict laboratory control and constant inspection guard every step of manufacture... assure you highest quality cable.

For expert engineering assistance and prompt service on all your cable applications, write or call today.

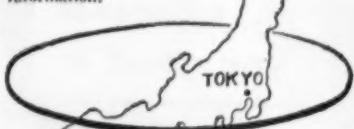


Ask

The Fuji BANK, LTD.
about Japan...



For all those with business interests in Japan, The Fuji Bank, Ltd. offers complete banking facilities and information.



Established in 1880
184 Branches throughout Japan

The

FUJI BANK, LTD.

CAPITAL ¥ 2,700,000,000.
Chairman of the Board of Directors SEIJI SAKO

HEAD OFFICE: Chiyoda-ku, Tokyo
LONDON BRANCH: Coptic Hall Chambers, Angel Court, London E.C. 2



PAL

* to the FAR EAST

* TWO FLIGHTS WEEKLY

* with DC-6B, DC-6 PALiners

* FLY THE ROUTE OF THE Orient Stars

* To MANILA TOKYO
* HONG KONG BANGKOK
* TAIPEI CALCUTTA

* and on to Europe via Pakistan and Israel.

* * PAL PHILIPPINE AIR LINES *

Business Has Its Say on Ex-Im

Replies to Congress agree it's useful, maybe too cautious . . . Berlin names Reuter successor . . . Overseas oil investments triple . . . Soviet bid in Guatemala.

U. S. business is getting its chance to tell Congress what it likes and dislikes about the Export-Import Bank. Replies to some 2,500 questionnaires sent to domestic customers of the bank, and to U. S. commercial banks, are pouring in on the staff of the Senate Banking & Currency Committee, which is in the midst of a study of both Ex-Im and the World Bank.

Not all the returns are in, but committee chairman Sen. Homer Capehart, of Indiana, thinks he has enough answers to detect the trend of U. S. business thinking about Ex-Im's operations. And with this trend in mind he has set out on the second step of his study. Last week, together with some other congressmen, he left on a seven-week flying junket through Latin America to get a personal look at Ex-Im-financed projects there.

• **Queries**—It's the first Congressional checkup on the bank since it was set up in 1934 with a lending authority of \$11-million. Since then Congress has upped its lending authority until it now stands at \$4.5-billion, and the bank has become an important factor in U. S. foreign economic policy (BW—Aug. 15 '53, p136).

The banking committee sent one type of questionnaire to manufacturers and trade associations. Bankers were queried separately; later, labor and farm organizations will be polled.

By and large, the consensus of both the manufacturers and the bankers is that the Ex-Im Bank is doing a useful job. But there are reservations and suggestions for improvement.

• **Beefs**—A major complaint of U. S. exporters (and foreign loan applicants as well) is that the bank is too slow in acting on loan applications and that it follows too cautious a loan policy. This conservative policy, to be sure, has resulted in a net profit of \$51.8-million in the latest fiscal year. But the fact that Ex-Im still has an uncommitted \$1.2-billion in lending authority is considered proof by some exporters that the bank is far too cautious.

Some manufacturers who are beginning to feel increasing British, German, and Japanese competition abroad say Ex-Im's program isn't big enough to enable U. S. industry to hold its share of world markets. But they agree that without Ex-Im's long-term, low-interest loans they would be in even worse shape.

• **Clean Bill**—The bankers who've replied to the poll to date all give Ex-Im a good bill of health. They feel that it has provided necessary long-term financing that couldn't possibly have been handled by private banking. None thinks that Ex-Im has taken any business away from them, but some figure it could use their services more than it does.



Berlin's New Mayor

Dr. Walther Schreiber was elected last week to the most important mayoralty post in the world. If he can form a city government, he will become mayor of West Berlin, following the late Ernst Reuter, one of communism's most implacable foes.

Schreiber, 69, is a Christian Democrat; he was leader of the party in the Soviet zone right after the war. He broke with the Reds as soon as they began communizing East Germany.

Schreiber's election, however, may touch off troublesome political squabbling. He was elected by a rightwing alliance with the Social Democrats, the largest single party, opposed. Reuter, a Social Democrat, ruled a coalition. Whether Schreiber is actually able to form a city government depends on the Socialists' consent to go into a Christian-Democrat-ruled coalition.

New Billions in Oil

It's no surprise that oil men are the most internationally minded executives in the U. S. In the past 10 years,

they have tripled their investments overseas. And while their stake abroad in 1943 accounted for just 18% of total U. S. foreign investment, this year it adds up to a thumping 30%.

In a survey released last week, the Dept. of Commerce pegs U. S. oil investment abroad at \$4.4-billion, up from \$1-billion in 1943. The lion's share of the increase has funneled into the Persian Gulf area—Kuwait, Saudi Arabia, Bahrain; the investment there is over six times what it was a decade ago.

Other nations that got a fat share of U. S. oil money are Venezuela and Canada.

In addition to the huge investment in producing countries, no less than a billion dollars is tied up in secondary facilities—refineries, transport, distribution installations. Britain, for example, has taken in \$123-million in U. S. capital, mostly for new refining capacity.

Last year, this world oil empire netted U. S. investors a cool \$1-billion, after royalties and taxes of all kinds. That's a better than 20% return on the capital investment.

Soviet Salesman

In bad Spanish but with a suave manner, a Russian official is trying to find a market in Guatemala for Russian-produced consumer goods. Last week, Mikhail Samilov, of the commercial staff of the Soviet Embassy at Mexico City, set out on a tour of that Central American nation with the pitch that Russian products are just as good as those now sold in Guatemalan stores and a lot cheaper.

His tour is the first effort by the Soviet Union to invade the Central American consumer goods market in volume. Samilov says that Guatemala is the first stop, that he will go after the other countries in the area when he finishes his job there. That might not be so easy. Government officials in El Salvador, Honduras, Nicaragua, and Costa Rica say they won't even let him fly over their countries.

• **Reception**—The Guatemalan government has no such scruples against doing business with Communists, and it has received the Soviet salesman with the same enthusiasm with which it welcomed a Czechoslovak commercial representative some months back. So far, Guatemalan merchants haven't been so enthusiastic, and no actual orders have been reported. But with the sales talk Samilov is handing out and the low prices he's quoting, chances are good that before long some Russian merchandise will be prominently displayed in Guatemala City.

• **Prices**—When, and if, these goods do appear, they will bear price tags well under those seen on U. S., Canadian,



A RISE-AND-FALL THAT ALSO TURNS

...may hold an idea YOU can use!

In many engines, the Thompson-developed "Rotocap" systematically rotates the engine exhaust valves as they rise and fall. This rotation greatly extends valve life.

This same principle...using linear motion to produce rotary motion...may have undreamed-of applications in your product. The Valve Division can work with you to engineer adaptations of these Thompson "Rotocaps" in dime-size units for delicate machines or as rugged giants for heavy machinery.

We'd like to explore with you new fields and uses for the "Rotocap"...a simple device for making back-and-forth strokes turn in measured steps.

VALVE DIVISION

Thompson Products, Inc.

DEPARTMENT VB-10 • CLEVELAND 17, OHIO



BANK OF MONTREAL

Canada's First Bank Coast-to-Coast

New York: 64 Wall Street

San Francisco: 333 California Street

Chicago: Special Representative's Office: 38 South Dearborn Street

Head Office: Montreal

575 BRANCHES ACROSS CANADA... RESOURCES EXCEED \$2 BILLION



and Western European products in Guatemala. Samilov says Russia has bicycles that can be retailed at \$20, with plenty of profit for the retailer. Most of the bicycles now sold in Guatemala are European models that retail for \$60 or \$75.

Samilov also offers radios and record players that are exact copies of U. S. models at prices substantially lower. In plugging these sets, he stresses the fact that tubes and parts are interchangeable with U. S.-manufactured ones.

BUSINESS ABROAD BRIEFS

Bolivia says it's ready to fix a compensation price for the nationalized Patino, Aramayo, and Hochschild tin mines. A deal was made a couple of months ago under which Bolivia agreed to set aside some tin earnings for future compensation payments (BW-Jun.20'53, p128). That deal wasn't very satisfactory (it's void when tin drops below 80¢ a lb.), and the new statement is also being met with skepticism.

The Buy-American proviso doesn't apply to aluminum in any form, according to a ruling last week by Assistant Defense Secretary Charles Thomas. Previously, purchases were made on the assumption that only raw aluminum was exempt from the clause that goods for defense must be bought here unless the supply is short, or the foreign price at least 25% cheaper.

An export subsidy for U. S. citrus growers was announced by the Agriculture Dept. last week. They'll get \$1 a box for oranges exported, 75¢ for grapefruit. Reason: A bumper crop has left the nation with a big surplus.

General Motors' Electro-Motive Div. and Henschel & Sohn, Kassel, West Germany, Europe's biggest locomotive builder, signed an agreement to cooperate in the design, manufacture, and marketing of diesel locomotives.

To expand overseas sales, General Foods Corp. last week consolidated its foreign business by creating a new post—vice-president for international operations. It hired an advertising man to fill the job—George Bryson, former Young & Rubicam vice-president.

Egypt approved Hilton Hotels Corp.'s plans to build an ultra-modern hotel on the Nile in cooperation with an Egyptian bank (BW-Jul.25'53,p152). Hilton representatives are now on their way to Cairo to complete the deal.



Even the old fashioned
grindstone steadily crum-
bles away. With a mere
fraction of that wear,
modern untreated con-
crete floors quickly dust
and wear.

Your concrete floors are *Crumbling away*

**LAPIDOLITH*, world's only patented chemical concrete hardener, gives
you a Bonded Guarantee your floors will not deteriorate, will not dust!**

The facts: Dusting floors mean dollars crumbling away! Sonneborn will actually give you a Bonded Guarantee (backed by the National Surety Corporation, of New York): your floors will be hardened; your floors will not dust; inexpensive, easy to apply Lapidolith makes your floors as much as 10 times harder, adds 20 to 30 years extra life.

The inability of ordinary concrete hardeners to penetrate confines their hardening action entirely to the surface.

Lapidolith, on the other hand, actually penetrates beyond the surface, soaks deeply into the concrete, due to its exclusive penetrating agent DYNEX. A powerful chemical reaction takes place which makes the concrete so hard, so dense that it becomes chemically resistant, dust free, and up to 10 times harder! *Instead of crumbling dollars away, your floor actually improves with wear!*

Naturally, Lapidolith hardened floors virtually eliminate the expensive maintenance and replacement costs that plague the owners of non-hardened floors. The

proof is in the millions of dollars Lapidolith is saving for all types of industry right now!

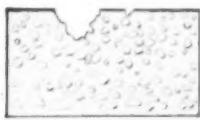
For over half a century, industry has taken advantage of Sonneborn research and developments in the highly specialized field of concrete floor hardening. As leader in the field, Sonneborn is always ready to put this experience and know-how to work for you. Write, and tell us about your floor problems and let us prove results by referring you to Lapidolith installations in your locality.

*Complete facts on Lapidolith now available to archi-
tects, builders, contractors and maintenance men. Write
on your letterhead for full information today.*

TRADE MARK REG. U. S. PAT. OFF.
REPRESENTED IN CANADA



Lapidolith soaks into
concrete, stops wear
and dusting!



Ordinary hardeners
react strictly on sur-
face, temporary pro-
tection at best!

*SEE OUR CATALOGS IN SWEET'S
Architectural 8/SO
Industrial 5/SO
Construction 4 1/SO
Plant Engineering*

Product of Sonneborn RESEARCH
1903—1953

Building Products Division **L. SONNEBORN SONS, INC.** 404 Fourth Avenue, New York, N.Y.
MAKERS OF HYDROCIDE AND S-X WATERPROOFINGS • SURE RUST PREVENTION PAINT



Now...they're even
PUMPING POTATO SALAD!

An example showing how the versatile
MOYNO PUMP may solve your pumping problem

**Features of the MOYNO that may solve
 YOUR pumping problem**

Positive Displacement—Moynos are available to pull up to a 29" vacuum while discharging under pressure. Big Moynos deliver up to 250 g.p.m. at pressures to 600 p.s.i.

Gentle—no churning; won't break up semi-solids . . . won't aerate liquids.

Reversible—pumps with equal efficiency in either direction.

Trouble-Free—self priming; won't cavitate or vapor-lock. Just one moving part—no valves to stick, no pistons to gum up. Built for tough service. Easy to maintain.

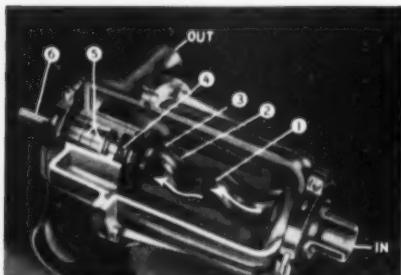
As you can imagine, any conventional pump would quickly make mincemeat out of potato salad! But not the versatile MOYNO Pump! In fact, this unique pump was the answer to a years-old materials handling problem in an Eastern food processing plant.

Why? Because of the Moyno "progressing cavity" principle—found in no other pump. Instead of valves and pistons that stick, or vanes that cause churning and turbulence, the Moyno has a simple rotor, operating within a stator. The small illustration

shows how progressing cavities are formed as the rotor turns. These cavities move along smoothly, without closing up or squeezing the material. That's why Moynos carry liquids, pastes, solids in suspension, abrasive-laden slurries—almost anything that will go through pipe—with positive, non-pulsating pressure!

Potato salad is only one of the many successful, dramatic applications for Moyno Pumps. You may be able to save money or solve a problem by finding out more about the world's simplest, most versatile pump!

If you have a pumping application—in your plant or in your product—write today for free copy of Bulletin 30-BW. It will give you complete facts!



Cutaway view of small Moyno suitable for washers, drink dispensers, gasoline pumps and oil burners, circulating liquids, etc. As rotor (1) turns, cavities (2) move toward end of stator (3). Automatic shaft seal (4), precision ball bearings (5), drive shaft (6). May be designed to meet your problems.



ROBBINS & MYERS, INC.

SPRINGFIELD 99, OHIO • BRANTFORD, ONTARIO



Fractional & Integral h.p.
Motors & Generators



Electric Fans



Electric & Hand
Hoists & Cranes



Moyno
Pumps



Propellair Industrial
Ventilating Equipment

INTERNATIONAL OUTLOOK

BUSINESS WEEK
OCT. 31, 1953

A BUSINESS WEEK



Korea remains the primary concern of the diplomats, both East and West. At midweek negotiations there were hopelessly stalled—and the truce seemed in danger.

In fact, you can see no truly satisfactory Korean settlement on the horizon. The best hope now is probably a return to the uneasy, potentially explosive status quo of June, 1950.

Yet there's reason for optimism that the war won't be renewed. Neither the Chinese nor the United Nations want to topple the truce. Syngman Rhee, for all his dire threats, is sitting tight for the present.

The Chinese have sustained a terrific psychological defeat in the prisoner-explanation fiasco.

So they're blaming the U.N. repatriation team, endeavoring to avoid further loss of face. But, in the end, there's little doubt that the prisoners will be freed, and the Chinese will in fact welcome the end of the affair.

Communist bluster at the "preliminary political talks" at Panmunjom is partially designed to cover up the prisoner business.

Even there, U.S. negotiators see some hope of progress. They think the Chinese will eventually agree to a compromise on the political conference.

The Soviet role in the Korean dickering is difficult to assess. It looks as if the Kremlin would like to block the conference, hoping that President Rhee will precipitate a crisis among the allies.

It's doubtful that Peking has any stomach for such a dangerous game.

On the face of it, Soviet policy seems more threatening now than at any time since Stalin's death.

The press is trotting out some of its old Hate America topics; Soviet notes to Greece and Turkey employ the sabre-rattling tones of two years ago; tentative Western talk about security guarantees for Russia are bluntly rejected.

This warlike talk may be more defensive than offensive. It sounds like an attempt to mask the crisis within the Soviet camp.

Look down the list of Soviet troubles. East Germany keeps bucking under Red rule and plant shutdowns are reported in the Ukraine. A serious grain shortage has developed in Hungary, which is counted on as the breadbasket of the satellites.

At home, Soviet leaders feel obliged to step up their promises of a better deal for the people.

The Organization for European Economic Cooperation met in Paris this week on a hopeful note—for U.S. business as well as European. In fact, Harold Stassen, Paris-bound, said that Europe is having its best economic year since the war.

Western Europe is running a healthy dollar surplus, thanks to U.S. military aid spending and to rigid import curbs on dollar goods.

It's the import curbs that trouble some European economists. They feel that the restrictions have deprived Europe of needed machines and

INTERNATIONAL OUTLOOK (Continued)

BUSINESS WEEK
OCT. 31, 1953

raw materials. And they continue to worry about a "slowdown" or "stagnation" in Western European economic activity.

So the economists are warning OEEC members that the restrictions on dollar goods are already beginning to boomerang, and should be eased soon.

In the U.S., businessmen and government experts are wondering about the trade outlook for 1954. Here is some of their thinking to date:

• For 1953, our imports should nudge \$11-billion, up \$300-million over last year. That's promising, but it represents a decrease from the rate for the first part of this year. The drop-off shows up primarily in nonferrous metals and rubber.

• Exports this year (excluding military shipments) may be a shade above \$12-billion, off \$1-billion from last year. Coal and farm exports have dragged badly.

Crystal-gazing about 1954 depends on your reading of the trend in U.S. business.

Barring a downturn here, U.S. exports might rise slightly in 1954—to perhaps \$13-billion. That's because foreign dollar reserves should go on increasing as our military spending abroad continues (this year it runs to about \$2.5-billion, with important contracts in the works).

The export picture depends on imports, as well as our spending abroad. If all goes well, imports should hold steady at \$11-billion. But a recession here could knock imports galley-west.

If there are export gains next year, they won't be across the board.

Agricultural sales are expected to rise slightly from their present trough. Washington plans to ship some \$165-million worth of surplus farm products abroad under the Mutual Security Act.

Farm machinery and auto exports are expected to drop, capital goods to rise. Textiles and chemicals should hold their own.

You can't discuss trade without reckoning on aid: Right now Washington is doing some high-powered thinking on the subject.

There are a number of ideas on how to make aid more palatable to Congress. They reflect Administration fears that congressmen, eyes on the fall elections, are going to be rough on foreign aid of any kind—especially economic help.

Administration officials feel some economic aid will have to continue. They doubt that even an economy-minded Congress would want to cease aid to a divided Austria, take Syngman Rhee off the aid leash, refuse to buoy up the troubled Iranian and Bolivian governments, or cut Formosa's role.

So you can expect an effort to stress military help rather than direct economic aid—wherever it can be done without sacrificing policy objectives. The offshore arms buying program, for example, helps support foreign budgets and at the same time provides military hardware.

DOW

INCREASE MANPOWER EFFICIENCY WITH MAGNESIUM PORTABLE TOOLS

Portable chain saws "Made with MAGNESIUM" double output per man by cutting weight—another example of how MAGNESIUM helps industry



Something new has been added! Not too long ago these rugged pieces of equipment were so heavy that they required two-man operation. Many models of today's chain saws can be handled by one man, yet their output, power and durability are better than ever. The difference is Magnesium . . . the world's lightest structural metal . . . useful wherever weight is a penalty.

Magnesium has made portability more than just a word. Lightweight castings, extrusions and sheet have cut important pounds off a wide range of tools. One fourth the weight of iron, Magnesium brings real savings in

manpower and reduces worker fatigue. Yet Magnesium provides the strength and durability that is a must in portable equipment.

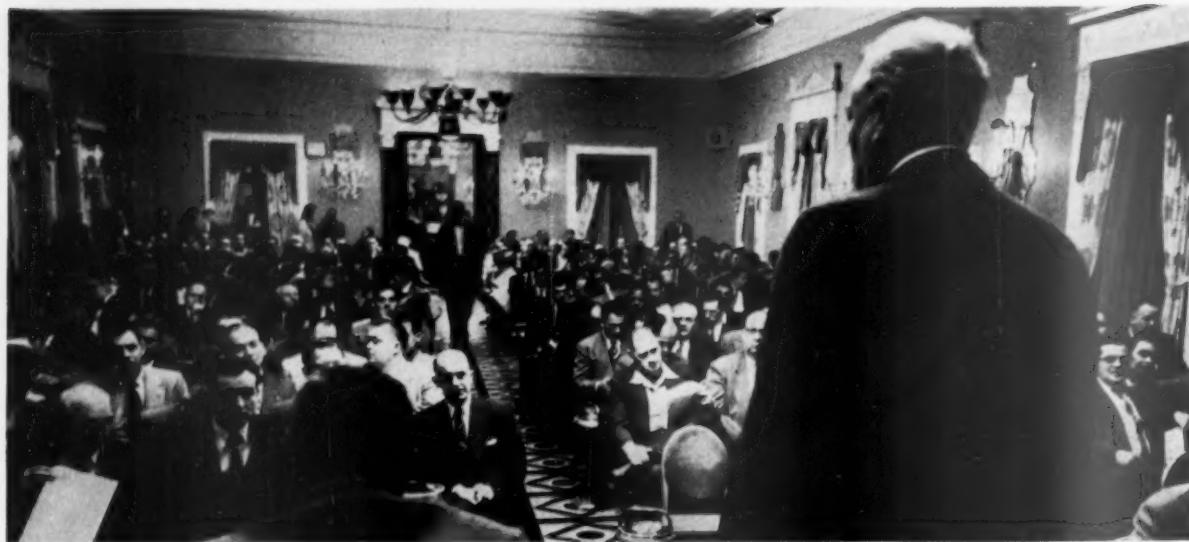
If you are buying portable tools for your needs, look for the brands that are made of Magnesium. You'll find they give that lightweight factor that helps cut costs.

If you manufacture equipment that must be moved, investigate Magnesium. Write us for further information on this versatile product. THE DOW CHEMICAL COMPANY, Magnesium Department, Midland, Michigan.

you can depend on DOW MAGNESIUM

DOW

LABOR



"OPERATION SOUNDOFF" is what David McDonald (foreground) called a conference of Steelworkers wage-policy committeemen.



McDONALD, president of USW, cited some 1954 objectives, got members' views.



". . . few understand what we mean by annual wage. We should tell the public . . ."



". . . the annual wage is something we're entitled to, just like pensions or insurance."



". . . if a country like Germany can have guaranteed wages, why can't ours?"



". . . the bosses said they couldn't give pensions and insurance, but they did."

Steelworkers Sound Off on Demands

As usual, the United Steelworkers (CIO) will ask for a raise in 1954 contract bargaining. But when USW negotiators open talks with basic steel representatives, probably in May, wages are likely to be only a routine issue.

Demands aimed at present and future security will be the big thing.

Last week's conference of USW's important wage-policy committee in New York strongly indicated this. Ordinary "pork chop" or wage issues were

hardly mentioned in the open, three-day conference—though they're not out of the picture entirely. The emphasis from the start was on pensions, insurance, and a guaranteed wage.

Over-all, it looks as though USW's

CASE 36,550



... from the PRODUCT RESEARCH files of Arthur D. Little, Inc.

A Happy "Wedding" Sells Lane Cedar Chests

For 31 years, The Lane Company, Inc., has been the cedar chest leader. Their leadership was achieved by making science the sales partner of sentiment. In the first year of their incorporation they retained Arthur D. Little, Inc., as research consultants. This relationship has continued ever since.

How did Product Research by Arthur D. Little, Inc., help? E. H. Lane, President of The Lane Company, gives the answer. He writes, "Arthur D. Little, Inc., working as our own research department, has developed product improvements for nearly every selling season. These improvements have provided our sales and advertising departments with features that have given us a real edge over competition." This 31-year continuing research program has included such projects as:

Technical Studies of clothes moths, cedar-wood oil, varnishes, lacquers, plastics, and hardware to give Lane chests superior appearance, odor, and insecticidal action.

Invention of devices to conserve cedar aroma and equipment to test tightness. These led to low-cost insurance protection against all moth damage.

Development of an aroma-controlling interior finish in the chests. This finish looked so luxurious that competition was induced to use it, on a royalty basis.

Cost Reduction by developing electrostatically applied felt linings for chest trays.

Market Research to keep Lane informed of changing conditions.

Thus, the happy "wedding" of science and sentiment has paid rich dividends to The Lane Company.

Is Your Product a Leader? Will creative imagination improve your sales? You may find the right answer in the laboratories of Arthur D. Little, Inc., where all fields of applied science and technology are represented. Here is concentrated a greater

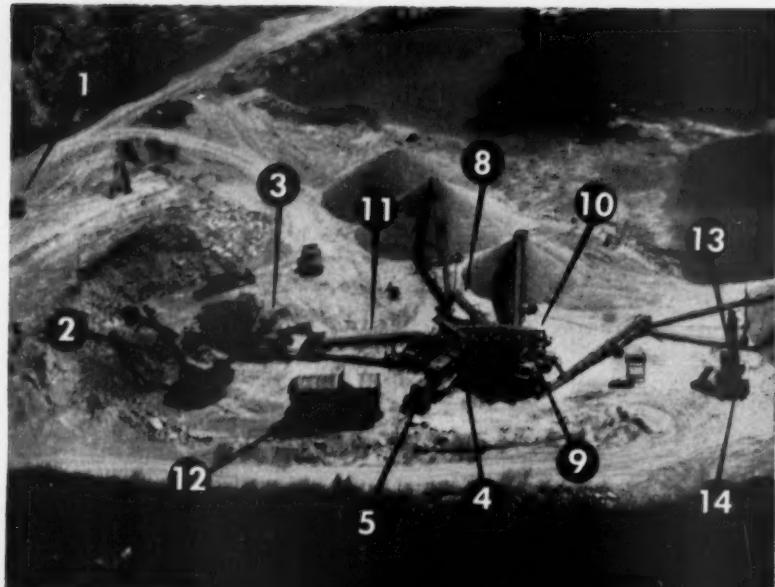
diversity of specialized personnel and facilities than a single company can normally focus on a product development problem. Here, scientists blend their knowledge and talents with the industrial research experience of engineers and other technologists. These teams are ready to work with your own organization to develop new and better products with wider markets.

Our folders, "Product Research" and "A Few Case Histories" will tell you more about these product development services. We shall also be glad to confer with you without obligation. Phone Boston, UNiversity 4-9370 or write:



Arthur D. Little, Inc.

30 Memorial Drive, Cambridge 42, Massachusetts



TWIN DISC 14 Drives in action!

Typical example of powered equipment in modern industry is Stoneridge Limestone Company's aggregates plant near Rochelle, Ill. And typical example of Twin Disc's complete range of Friction and Hydraulic Drives is the aerial photograph above of the Stoneridge operation. Nine of the Twin Disc Drives were built-in by the original equipment manufacturer . . . five were installed by Stoneridge.

Whether built-in or added for extra performance, Twin Disc Drives have the right design, construction and capacity. See your Authorized Twin Disc Hydraulic Dealer.

And here they are . . . count 'em!

Twin Disc Spring-Loaded Clutch on International-powered LeRoi Compressor (1).

Twin Disc Friction Power Take-Offs on Cummins-powered Bay City Shovel (2); Caterpillar-powered Universal Jaw Crusher (3) and Universal Hammer Mill (4); and on Minneapolis-Moline-powered Pioneer Roll Crusher (5).

Twin Disc HYDRO-SHEAVE® Drives on Stoneridge-built horizontal conveyor (8); Simplicity Vibrating Screen (9); Pioneer Vibrating Screen (10); and Stoneridge-built Conveyor (11).

Twin Disc Hydraulic Coupling on Hercules-powered generator plant (12).

Twin Disc Friction Clutches (two each) on Nelson P-10 Loader (6, 7; not shown); and Nelson P-11 Loader (13, 14).



TWIN DISC

TWIN DISC CLUTCH COMPANY, Racine, Wisconsin • HYDRAULIC DIVISION, Rockford, Illinois

BRANCHES: CLEVELAND • DALLAS • DETROIT • LOS ANGELES • NEWARK • NEW ORLEANS • SEATTLE • TULSA

demands next spring can be summed up like this:

- An expanded, noncontributory insurance program.

- Higher pensions, with some provision giving workers a vested interest in accumulated pension contributions by employers.

- A big enough wage increase to keep steelworkers' pay rates in line with those of auto workers.

- A wage-guarantee program that will call for considerably less than annual wage in the ordinary meaning.

The first three of these can be considered as "musts" for the steel union negotiators; the fourth, the wage-guarantee program, may be deferred—although no management dealing with USW can safely assume, this time, that the guaranteed-wage demand is being made for bargaining purposes, as it has been in the past.

- **Wages**—Questions about wage policy were put aside early in the conference when David J. McDonald, president of the United Steelworkers, commented: "We're not going to adopt a wage policy at this early date . . . it would be foolhardy to adopt a policy now, with the chance of so many things happening between now and next June."

Unofficially, though, committeemen had wages in mind. When steel bargaining begins, the rival United Auto Workers (CIO) will just have had a 5¢-an-hour annual-improvement-factor increase added to wages—the second such 5¢ productivity raise since the steel union's last pay hike. No matter what happens to the cost of living before June (latest figure, page 154) the steelworkers' pay gains will be lagging behind those of Walter Reuther's auto workers when negotiating starts—by as much as 10¢ an hour, or more.

Under the circumstances, USW will certainly ask for a wage increase, although probably a moderate one. Arthur Goldberg, USW's general counsel, took passing note of this when he said that steelworkers' weekly pay is now running at about \$91.67 but that "this present rate is not enough, and we won't be happy with it."

- **Other Interests**—However, the steel union's major interests obviously are in the social-insurance field. Present pension-insurance contracts haven't been changed since they were negotiated in 1949. And USW wants to go after "necessary revisions" at the first possible bargaining date: May, 1954.

- **Insurance Boost**—On insurance, the present contracts provide for hospitalization, medical benefits, and life insurance. Employers and employees share the cost, 5¢ an hour.

USW plans to demand that employers meet the entire cost of the insurance, and expand it to include such things as dental and medical care not

now provided, fully paid hospital bills, increased surgical benefits, and other expenses not covered in what USW calls "inadequate" present programs.

John Tomayko, insurance-pension technician for USW, noted that this expansion would probably cost more, but said that the union's aim must be a program "not tied to theoretical cost factors but . . . based on needs."

• **Higher Pensions**—Even more than in insurance programs, "inadequacies and shortcomings" have developed in pension plans since they were set up in 1949, USW complains.

For instance, the union says, when the present pension plan was set up an employer's expected share of a \$100 minimum pension (which includes the federal social-security benefit) was about \$65 a month, the difference between \$35 in social-security benefits and the \$100 total. Now, after two upward adjustments in the federal payment, the employer's share runs closer to \$25 and sometimes drops as low as \$15 a month, the union says.

When bargaining starts in May, USW plans to ask steel companies to resume paying the full amount they originally expected to—the \$65 supplement to social-security benefits—and to increase the pension program still further "in keeping with the increases in living costs since 1949."

What does this mean, in dollars and cents? Probably a demand for a minimum of \$150 a month, possibly a little less, although committeemen's estimates of what the union should ask for ranged from \$100 a month from employers, plus social security, to as high as \$200 a month from employers alone.

In addition, the union's wage-policy committee wants pension mobility—that is, it wants a steelworker's pension rights to go with him from job to job in the industry. It wants assurance that retirement will not be made compulsory "as long as an employee is willing and able to work." And it wants retirement pay figured on the best five or 10 years' earnings of an employee, not—as now—on earnings in the last 10 years he works.

• **Serious**—How serious are steelworkers about negotiating pension increases? Sam Camens, of Youngstown, expressed a common view on this when he told the wage-policy committee: "We are very serious about this in our locals back home. We are prepared to hit the bricks in 1954 if we have to."

And Goldberg commented: "We negotiated a good program in 1949 but it is not good enough for 1954 . . . we were the pacesetters on industrial pensions then and we're going to do the job again next year."

• **And Annual Pay?**—There is no question about the steel union wanting an annual wage—"we have to eat year-

Rock Island Freight is on the MOVE...



...to help keep America Prosperous

Rock Island's diesel-powered ROCKET FREIGHTS serve 14 mid-continent states. They possess speed, power, stamina . . . do a tremendous freight hauling job . . . have earned a reputation for dependable, on-time deliveries. If you have freight moving into or out of any of these states, consult any Rock Island representative:

ARKANSAS
COLORADO
ILLINOIS
IOWA
KANSAS
LOUISIANA
MINNESOTA

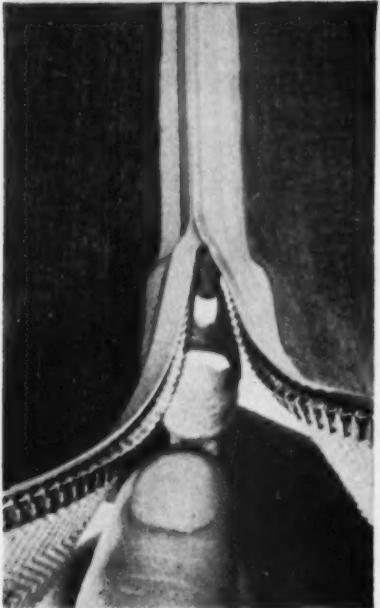
MISSOURI
NEBRASKA
NEW MEXICO
OKLAHOMA
SOUTH DAKOTA
TENNESSEE
*TEXAS



*Thru Texas Gulf Ports Rock Island serves all the world.

Nothing quite takes the place of a
diesel-powered Rocket Freight . . . so
when you ship, ship Rock Island.

B.F. Goodrich



New B.F. Goodrich seal is watertight, airtight, zips open

A NEW KIND OF SEAL keeps gases, liquids, dirt in or out. Here's how it works:

Molded rubber lips overlap with precision to seal tight even without pressure. Under pressure the seal actually tightens. The rubber seal is applied to an ordinary zipper which zips open or shut in a hurry.

The B. F. Goodrich Sealing Zipper is so flexible it goes around curves and odd shapes where clamps won't work. Can be made of compounds to resist weather, oils, gasoline, chemicals. Can be sewn or cemented to fabric, metal, wood, glass. The rubber can be made to match any color.

It's ideal for any use that combines a need for an airtight, watertight seal with a need for quick opening. The B. F. Goodrich Co., Zipper Div., Akron, Ohio.

SEND COUPON FOR FREE FOLDER

Gives design advantages, successful case histories, suggested uses.

The B. F. Goodrich Company Dept. A-96, Akron 18, Ohio Please send Free Zipper folder		
Name
Company	Title
Address
City	Zone	State

round, so we ought to be paid that way," one wage-policy committeeman said. However, the committee's determination to get one in 1954 negotiations does not seem so strong as its feeling about insurance and pensions.

USW first went all-out on the guaranteed wage issue in the 1940s—asking for a flat, simple guarantee of 40 times average hourly earnings for each week of a 52-week contract period. This demand got nowhere. Earlier this year, the union asked Aluminum Co. of America for a modified plan estimated to cost Alcoa 10¢ an hour per employee (BW-Jun.27'53,p139). This demand was dropped, but it is the basis for what USW will go after in basic steel next year.

The union will demand that employers set up trust funds out of which unemployment compensation benefits for "involuntarily jobless" steelworkers will be supplemented—to give each worker "a minimum weekly payment

of 30 times [his] standard hourly wage rate" while he is idle. The employer's liability continues only for a 52-week period, or until the trust fund is exhausted.

To Fight or Not—There are other provisions inserted for the protection of employers—intended to eliminate many of the old arguments raised by management against the wage-guarantee demand. But, realistically, USW expects a hard fight—and, possibly, not victory without "using the same devices we used in winning our pension and insurance plans," that is, no victory without a strike.

The big fight—and the strike—for a wage guarantee could come in 1954, but probably won't, despite warlike talk by USW on the issue during bargaining preliminaries. McDonald, for instance, commented that "while I predict a guaranteed annual wage plan in fabricating and basic steel, it cannot be won overnight or easily."

What's Happening to the Cost of Living

	Total		Food 1947-49 = 100	Clothing 1947-49 = 100	Housing	
	Cost of Living 1947-49	1935-39 = 100			1947-49 = 100	Total 1947-49 = 100
September, 1947 . . .	98.3	164.3	100.7	98.1	96.8	96.5
September, 1948 . . .	104.8	175.2	106.5	105.1	102.9	101.8
September, 1949 . . .	102.1	170.7	101.1	97.9	103.2	105.7
September, 1950 . . .	104.4	174.6	104.0	99.2	107.1	109.5
September, 1951 . . .	111.6	186.6	112.5	109.3	112.9	114.2
September, 1952 . . .	114.1	190.8	115.4	105.8	114.8	118.3
October	114.2	190.9	115.0	105.6	115.2	118.8
November	114.3	191.1	115.0	105.2	115.7	119.5
December	114.1	190.7	113.8	105.1	116.4	120.7
January, 1953	113.9	190.4	113.1	104.6	116.4	121.1
February	113.4	189.6	111.5	104.6	116.6	121.5
March, 1953	113.6	189.9	111.7	104.7	116.8	121.7
April	113.7	190.1	111.5	104.6	117.0	122.1
May	114.0	190.6	112.1	104.7	117.1	123.0
June	114.5	191.4	113.7	104.6	117.4	123.3
July	114.7	191.8	113.8	104.4	117.8	123.8
August	115.0	192.3	114.1	104.3	118.0	125.1

September, 1953 115.2 192.6 113.8 105.3 118.4 126.0

Data: U. S. Bureau of Labor Statistics.

BLS' index is now on a revised basis. It is linked to the interim-adjusted index for December, 1952, to form a continuous series (1) in terms of 1947-49 = 100; and (2) using a 1935-39 = 100 base. The former (1) is the fully-revised index BLS plans to continue beyond 1953.

Upward for the Seventh Time

The Bureau of Labor Statistics' monthly cost-of-living index climbed again in mid-September, to 115.2% of average living costs in the 1947-49 base period. This represents a gain of 0.2% over the index level a month before (BW-Sep.26'53,p176) and a new record high for the fourth month in a row. It was the seventh straight increase.

Few "escalator" agreements use a mid-September index figure as a basis for wage adjustments. The next important figure under c-of-l contracts will be that for mid-October. It will affect wages of auto workers; they're almost certain to get a 1¢ increase, and may get 2¢ if the recent steady, small rises in the BLS index continue.



Aircraft Strike for Auto Parity ...



... Halts Work on Supersonic Jets

Work on new supersonic jet fighters and other military aircraft was halted last week by a strike of 33,000 CIO aircraft workers at North American Aviation Co. plants at Los Angeles (pictures, above), Fresno, and Columbus, Ohio. The issue was a United Auto Workers demand that plane plants match wages in auto contracts.

The auto-aircraft equality issue is an old one (BW—Aug. 8 '53, p122). UAW contends that its plane-building members are paid about 26¢ an hour less than auto workers doing much the same kind of jobs. The auto union wants

NAA—first major aircraft manufacturer to negotiate this year—to end this differential by a raise of upward of 23¢.

NAA contends such a raise, along with various "fringes" sought by UAW, would cost an "impossible" \$90-million a year. The company offers a 4% increase (about 6¢ to 8¢ an hour) and a revised cost-of-living "escalator" clause, a package that the company estimates would cost it \$14-million a year. UAW refused this in pre-strike bargaining.

Early this week, the Defense Dept. advised the Federal Mediation & Conciliation Service that the stoppage



with
**HOT-DIP
GALVANIZING**

Send your iron and steel products to a member of the American Hot-Dip Galvanizers Association. His years of experience plus collective know-how assure you of a top quality job—if it's iron or steel have it Hot-Dip Galvanized.



**Send for
Free
Booklet**

American Hot Dip Galvanizers Association
1506 1st National Bank Bldg., Pgh. 22, Pa.

Print _____

Name _____

Firm _____

Address _____

City _____ State _____



*in CINCINNATI
you'll like the
NETHERLAND or TERRACE*

PLAZA HOTEL

When in Cincinnati, your best bet is the friendly air-conditioned Netherland or Terrace Plaza Hotel. You'll feel "at home" with the perfect service, the most modern accommodations, and excellent food. Unexcelled facilities for business gatherings of all kinds.



John G. Horsman, General Manager
Owned and operated by

Thos Emery's Sons, Inc., Cincinnati, Ohio

Here's a Low-Cost Method of LONG-TERM CORPORATE FINANCING

... for working capital, additional plant and equipment or to refund existing bank loans. Discuss your needs with us without obligation. Write today for our informative booklet describing methods of long-term financing, mergers and the sale of closely-owned corporations.

W. T. GRIMM & Co.
INSTITUTIONAL INVESTMENTS
SPECIALISTS IN THE NEGOTIATION OF
DIRECT PLACEMENT LOANS • MERGERS
SALE OF COMPANIES
2315 LASALLE ST. 714 W. OLYMPIC BLVD.
CHICAGO 4. LOS ANGELES 15.
ILLINOIS CALIFORNIA
FINANCIAL 6-5265 PROSPECT 3809

"affects the national defense." Frequently in the past, such a notification has been the first step toward White House intervention in a dispute.

AFL's International Assn. of Machinists—which has a collaboration agreement with UAW (BW-Oct. 17 '53,

p175)—immediately pledged its full support to UAW. An IAM committee representing 75,000 aircraft workers in 10 southern California plants assured UAW that they would give it "any assistance necessary" against North American.

THE LABOR ANGLE

CIO's New Look at Sales Taxes

LAST WEEK there was held in Washington a conference on taxation, called by the CIO Committee on Economic Policy. It had more than passing importance.

No "official line" was laid down. That kind of thing is blared forth with trumpets, either in a well-publicized resolution put before a CIO convention or in a major speech by someone like CIO president Walter Reuther. This meeting was quiet, serious, intent; participating were CIO braintrusters and outside experts who were invited to present their ideas.

It would be wrong to identify the ideas presented by outside experts Prof. Walter Heller of Minnesota and Prof. R. A. Musgrave of Michigan as CIO policy—yet. But the CIO technicians knew the ideas Heller and Musgrave held, and the fact that they were invited to present them means, at the very least, that they were not unwelcome. There is some reason for believing that it means more: CIO is formulating a new approach to tax policy that is radically different from anything embraced before by any part of organized labor in the U.S.

UNION TAX POLICY has been unvaryingly simple, direct, and crude. Its underlying rationale has been, "Soak the rich." In practice this has meant stalwart support for steeply graduated income taxes, demands for near-confiscatory rates in upper income brackets, and higher inheritance levies. Beyond that, labor's position was mostly negative: opposition to low-income taxation, sales taxes, etc. Slogans built around these simple notions are still standard rhetoric for labor leaders.

Against that background, consider these statements of Musgrave to the CIO's economists: "As long as the over-all requirements of the tax structure remain anywhere near the present level, we cannot but continue to draw a substantial part of the federal tax bill from middle and lower income groups. . . .

"Suppose someone were to propose that the present system of federal excises . . . should be replaced by a general sales tax on all goods and services except food and housing. Imposed on the retail level, a 1% tax rate is estimated to yield about \$1.4-billion, so that a \$9-billion tax would require a rate of about 6% or 7%. Such a substitution, taken by itself, has its attractive aspects. . . ."

And consider this statement from Heller: "It is not impossible to visualize circumstances under which a general sales tax would be acceptable. . . ."

To be sure, these statements and others like them were hedged about with reservations, thirteen to the dozen. But in the institutional context in which they were delivered they are roughly equivalent to having a sober speaker before the NAM Labor Policy Committee declare that there may be some virtue in universal, compulsory union membership.

ASK A CIO ECONOMIST why this new view of public finance, and he answers that the CIO is getting more responsible and more sophisticated about the complex taxation problem. There is some truth in that. But there is another angle, not being openly discussed, that may explain some of the new enlightenment.

Almost half of the CIO's members—a large part of the more than 5-million workers affected—have wage rates determined by the movement of the cost-of-living index. At least as many more work in industries that, although not covered by escalator contracts, follow, willy-nilly, wage adjustments made in the big escalator industries. A sales tax or a broad program of manufacturers' excise taxes would have an immediately inflating effect on the index. Substantial wage increases would automatically follow.

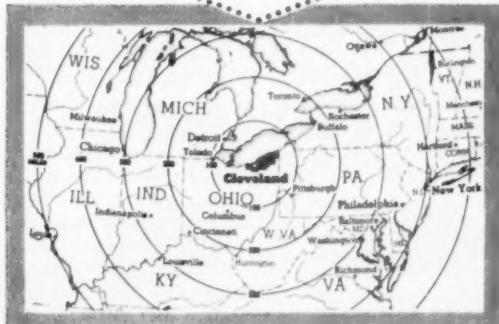
Tax policy can be used to open a shortcut on the collective bargaining road to higher wages.

CHEMICAL PRODUCERS SPEND \$356,200,000

**for new plant construction
to be closer to buyers...closer to suppliers
in Cleveland-Northeast Ohio**

**YOU SAVE COMING AND GOING
WHEN YOU LOCATE IN THE
BEST LOCATION IN THE NATION**

Via low-cost rail, water, pipeline or truck, you can ship to or receive from three-quarters of the nation's industrial might, located within 500 miles of Cleveland. 57% of the population of the country resides within this area.



You can practically reach out and touch the people you buy from, the people you sell to when you're located in the Cleveland-Northeast Ohio area. That's why smart managements of scores of Chemical Companies are choosing this location . . . the best location in the nation for new plants. They know that *here*, transportation costs of their basic materials and end products can be greatly reduced . . . that this saving in the cost of doing business allows for more competitive pricing, greater production, larger profits.

For complete data on the proximity of available chemicals, plant sites, water, power, labor and housing, call write or wire Development Department, Richard L. DeChant, Manager. All inquiries will be held in strictest confidence.

**THE CLEVELAND ELECTRIC
ILLUMINATING COMPANY**

77 PUBLIC SQUARE • CHerry 1-4200 • CLEVELAND 1, OHIO

Wait
till you see
how bright and
clean every copy
looks when
you use...



HAMMERMILL'S NEW BLUE-WHITE DUPLICATING PAPERS

for mimeographing and spirit duplicating

Nothing looks whiter to the eye than *blue-white*. That's why these *new*, improved papers from Hammermill are just about the brightest duplicating papers you've ever seen! They'll give you sharper, more arresting reproduction jobs every time. And their many other outstanding qualities assure better performance over all your office

duplicating machines, copy after copy.

Your printer can demonstrate how colorful printed headings stand out on these new papers. And he'll help you choose the right Hammermill duplicating paper for your specific needs. See him when it's time to restock. For samples, write to Hammermill Paper Company, 1455 East Lake Road, Erie 6, Pa.

NEW

HAMMERMILL Mimeo-BOND AND HAMMERMILL DUPLICATOR

With its new *blue-white look*, famous HAMMERMILL Mimeo-BOND produces truly outstanding reproduction jobs. Its exclusive air-cushion surface enables it to absorb mimeograph inks more rapidly, without smudgy set-off—to produce 5,000 or more clean, legible copies from a single stencil. New *blue-white* HAMMERMILL DUPLICATOR will turn out brilliant copies—that retain their brightness—on either spirit or gelatin-type machines. Both papers come in a wide range of handsome colors as well as the new blue-white.

NEW

WHIPPET MIMEOGRAPH AND WHIPPET DUPLICATOR

ASK YOUR PRINTER TO SHOW YOU HOW PRINTED HEADINGS FURTHER IMPROVE DUPLICATING PAPER'S APPEARANCE AND UTILITY.

No matter what type of material you reproduce on your machines, it can be more effective with printed headings.

Ask your printer to show you how reports, price lists, sales letters, charts, bulletins all become more arresting, and easier to prepare, with the proper masthead.



WHIPPET MIMEOGRAPH has now been given a sparkling new *blue-white look*. WHIPPET DUPLICATOR is a *brand-new* Hammermill paper—also made in a blue-white that commands attention. Both are an excellent value where looks of a job must be kept up and paper costs kept down. And both have uniform quality that is unusual at such low cost.

HAMMERMILL
Duplicating
Papers

LABOR BRIEFS



CIO spokesmen, including Joseph Beirne (picture, above) who heads the Communications Workers of America, are bidding these days for the farmers' political cooperation in 1954. Walter Reuther, CIO's president, told the National Maritime Union last week that "farmers' problems and our problems are alike—we must work together." This week, Beirne demanded that Eisenhower "stand back of his campaign promise and restore confidence and security to American agriculture."

Political action should be concentrated at the state level, Frank Hoffman, political guide of the United Steelworkers (CIO), urged last week. Hoffman, backed by president David McDonald, said USW will press with "money, manpower, and educational work" on state elections "where the greatest threat to us now comes from" rather than on national and Congressional races.

A no-raid pact is being discussed by the United Auto Workers (CIO) and tiny independent Mechanics Educational Society of America. Matthew Smith, who heads the 46,000-member MESA, said this week that the unions have "a verbal agreement" to halt raiding while pact talks go on. Despite its size, MESA has successfully fought off the 1.3-million-member UAW for years.

Strike vote is being taken by 15 non-operating railroad brotherhoods, now negotiating with the nation's major carriers on new contract terms. Deadline for balloting is Dec. 1. Meanwhile, the National Mediation Board has intervened in the dispute, setting in motion the mediation procedures that are provided for under the National Railway Labor Act.



The TREMCO MAN* is your **LIFE SAVER for FLOORS**

EFFECTIVE *Time Saving* FLOOR MAINTENANCE AT LOWER COST

The Tremco Man knows floors and flooring problems. Through sound diagnosis and thorough recommendations involving low, efficient, preventive methods, the Tremco Man can:

- (1) HELP YOU maintain good floors in good condition.
- (2) HELP YOU repair existing floors that are badly worn.
- (3) HELP YOU improve floors in many ways—changing pitch for drainage, hardening wood or concrete surfaces, making floors water and fire resistant, making floors warm and resilient, setting up an economical, continuing floor maintenance program.

There's a Tremco Man near you who will inspect your floors without obligation. Whether your floor work is done by a plant crew or contractor, the Tremco Man will be of value. He services every flooring job from start to finish.



FLOOR RESTORED WITHOUT INTERRUPTING SERVICE

Heavy loading of trucks rutted and cracked floors at First National Stores, Inc., Warehouse, East Hartford, Conn. Yet regular loading schedules for branch stores could not be interrupted. Methods recommended by Tremco Man F. J. Shea speeded resurfacing over one week-end and produced a durable load carrying floor.

TREMCO

PRODUCTS AND METHODS
FOR BUILDING MAINTENANCE

* The Tremco Man can also help you solve problems involving roofing and water repellence; sash maintenance; interior and exterior painting.



THE TREMCO MANUFACTURING COMPANY, Cleveland, Ohio and THE TREMCO MANUFACTURING COMPANY (Canada) LTD., Toronto, Ont.

OKLAHOMA'S MARKET AREA

RETAIL SALES

GROWTH **$10\frac{1}{2}\%$**

UP

INCOME
PAYMENTS
UP
\$2 $\frac{1}{2}$
BILLION

RETAIL
SALES
UP
\$4 $\frac{3}{4}$
BILLION

BANK
DEPOSITS
UP
\$2 $\frac{1}{2}$
BILLION

Here's a different style, 20th Century "Jack and the Beanstalk"—every facet of Oklahoma's economic status soaring upward since the state's last annual survey.

Strategically located near the geographical center of the United States, Oklahoma with its abundant natural resources, forms a growing "magic area" for industry. Within a 500-mile radius of central Oklahoma are 37 million people with \$52,700,000,000 in income payments—1942—\$37,917,521,000 in retail sales and bank deposits of \$39,481,794,000 affording an easily accessible market. Routes of railroads, trucking lines, bus companies and airlines extend in all directions from Oklahoma to all sections of the nation. For an industrial present with a glowing future, go Oklahoma.

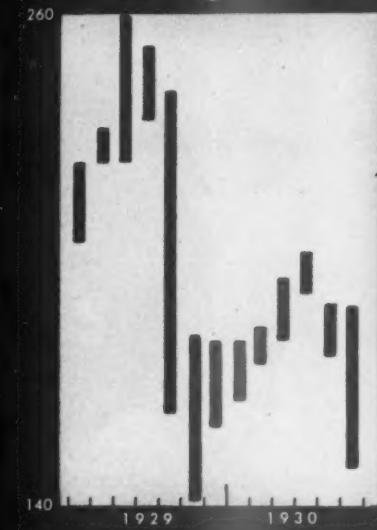


THE MARKETS

Is This the
Pattern of a
Dying Bull Market?



Here's How
... in 1929



Stock Price Booms: Some

It's a sad fact that no gong rings when a bull market has officially expired. Usually, weeks or even months pass before it's possible to pinpoint the moment when the patient breathed his last.

That absence of a warning gong accounts for the tremendous difference of opinion today on whether the bull market that started in mid-1949 is still kicking, or whether it formally turned up its toes last January. Wall Streeters are just as divided as investors and traders on how to translate the many ups, and more frequent downs, of the stock price averages this year.

• **No Pattern**—There are plenty of reasons for the difficulty of saying just what goes on. A big one is the fact that moribund bull markets do not follow any set pattern. Some vanish with the suddenness of a light snuffed out. In others, rigor mortis sets in so slowly and quietly that its progress goes unnoticed for weeks, even by some of the keenest market experts. Frequently, the death of the market combines the worst features of both types.

The charts above tell the story, chronicling the before-and-after events of those three famous bull markets that, we know now, expired in 1929, 1937, and 1946. No two of the tales are alike.

The most dramatic of all was the debacle of late 1929. More than any other boom, this one died to the sudden astonishment of almost everyone. It's true that a few smart observers had risked ridicule early in the year by saying stocks were too high, but no one in that giddy era had paid any serious attention to the dull warnings.

• **Reprise**—The "depression boom" of 1937 passed away in entirely different fashion. Actually, the upward progress of stocks, which had been going on since 1935, halted "officially" in March of 1937. But participants in the market were spared the inevitable consequences for months; it was nearly half a year later when prices really began to crack wide open.

The bull market of 1942-1946 more or less split the difference. It didn't burn marketers with the flash fire of 1929, but it didn't smolder so long as 1937 either. Stocks hit their high in late spring, and by August the bottom had fallen out.

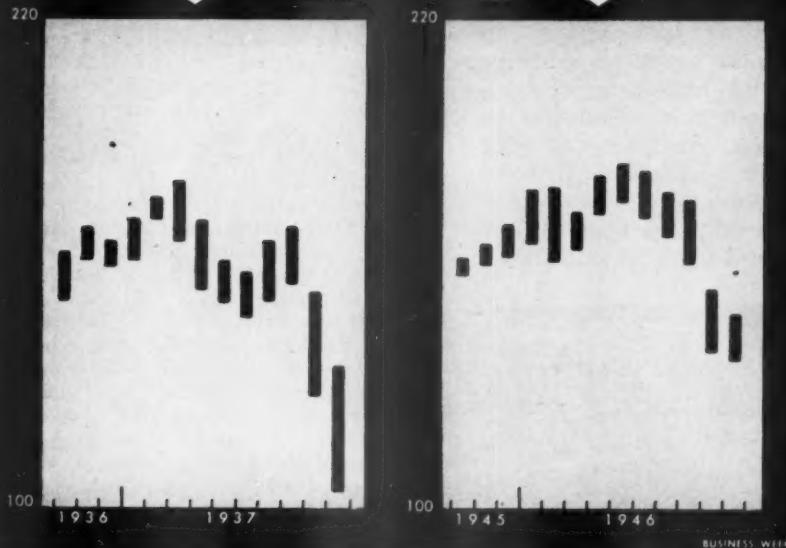
• **False Rallies**—Bull market break-ups do have one important factor in common: false rallies. These spurious booms show up pretty regularly, and they can cost traders plenty.

Sometimes, one of these upsurges of prices occurs just after the market takes

Other Bull Markets Faded ...

... in 1937

... And in 1946



Die Fast, Others Linger

the first of the eventually numerous plunges that will take it clear to the bottom. On other occasions, such rises appear when prices have barely begun to drift down from their peaks.

For the first type, the false rally that began in mid-November, 1929, is an ideal example. It began at a time when Standard & Poor's industrial stock average had dropped 109 points (44%) below its 1929 high.

A great many people figured that stocks just couldn't fall any further, and that belief caused the rally. By April, 1930, the buying pressure had retrieved up to 56% of the market's initial plunge.

But then the bottom fell out, with many stocks nosediving, and many shirts going with them. Two years later, when the destined rock bottom was really reached, S&P's industrial average was about 82% below the high of the April false rally.

• **Inching Down**—The 1937 break provides another type of false rally. Then, the initial sell-off from the bull market was not at all severe. Prices had started inching down in March, but three months later the S&P's yardstick showed a loss of only 33 points, or 18%. Traders promptly decided that the bull party wasn't over after all. By August,

enough of them had bought back in to wipe out almost 68% of the March-June loss.

Then came the bad price breaks of September and October, with still more to follow. By March, 1938, S&P's index was 51% below its peak of August, 1937.

• **Beware**—All this adds up to a single piece of advice: In this confused market, be everlastingly cautious.

If you are a trader, don't go out on any limbs until you are sure once and for all that the tree is solid.

If you're an investor tucking stocks away for your old age, take a thoughtful look at your holdings. Don't hesitate to pull out of any companies that are not well equipped to weather whatever storms may lie ahead. Don't be afraid to hold some cash in reserve. It won't earn its keep, but it's good insurance. And the cash could come in handy if sudden drops in the market push good stocks to bargain levels.

What if this "housekeeping" task does result in converting "paper profits" into actual winnings? Sell anyway. It's not smart to retain holdings that are already—or show signs of becoming—risky just because by so doing you are going to have to turn over to Uncle Sam a big share of your gain.

When you
think of
money at work



American families now purchase from 65% to 70% of their new furniture with the aid of consumer credit. Installment financing builds up a healthy furniture market, while it also provides more charming, comfortable homes.

Consumer credit at Peoples First National serves many Pittsburgh households. In 1952 alone, 56,465 people used Peoples Time Plan loans to buy furniture and other consumer purchases.

However, the furniture industry is only one of the many groups that benefit when we put money to work. We invite you, too, to take advantage of our 90 years of experience . . . our complete banking facilities.

**PEOPLES FIRST
NATIONAL
BANK & TRUST COMPANY**

Member Federal Deposit Insurance Corporation



RIDGWATER

Contract Manufacturers

CAN RELIEVE MACHINE LOADS
POSING PROBLEMS
IN YOUR PLANT

If you are not tooled up to handle an unusual machining requirement, check the advantages of placing such segments of your work with Bridgwater. Three of our plants are devoted *entirely* to contract work, and many of our

machines are specially designed and built by us to lower manufacturing costs through greater efficiency.

At Bridgwater, skilled craftsmen, complete facilities and half a century of experience are available to handle your machining problems, quickly—and at favorable cost.



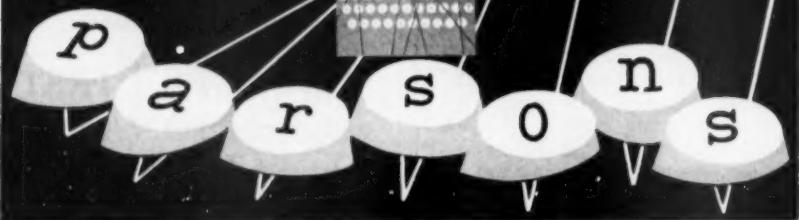
PROBLEMS

Get your letters read

You expect any letter you send to be read. Your letters are more likely to be read if they're on one of Parsons bond or writing papers. Made with new cotton fibers, they show the *fact and feel of quality*.

To find out for yourself, get your free copy of our portfolio of ten original letterhead designs by Lester Beall. It's called "How to Design a Letterhead"—and he tells you how. This portfolio won the distinction of acceptance by The American Institute of Graphic Arts' show, "Printing for Commerce, 1953". You'll find Beall's ideas and designs attractive and practical.

Write on your business or professional stationery to Parsons Paper Company, Dpt. 101A Holyoke, Massachusetts.



Easy Money

Why investment men watching goings-on in the bond market expect interest rates to drop.

A fresh show of strength in the U.S. bond market this week rolled out a red carpet for the Treasury's last big borrowing operation of calendar 1953. Watching these hospitable proceedings, Wall Street investment men thought they saw some clues to the probable action of loan costs in the near future. Their predictions:

- Easy money.
- Perhaps still lower interest rates than those prevailing now.
- But no return to the rock-bottom rates of 1946.

• **The Issue**—Taking a step in line with its plan to lengthen out the public debt, the Treasury offered—and quickly sold—a \$2-billion issue of 2½% bonds maturing in 7 years, 10 months.

Commercial banks were the biggest buyers of the issue, although the 7-year, 10-months term was longer than most banks would have preferred, and shorter than pension funds and other institutional investors would have liked.

• **Elsewhere**—Price action elsewhere in government securities added credence to the prediction of easy money:

• The Treasury 30-year 3½s, sold last spring, climbed to a record high quotation of \$1,041.25 per \$1,000 bond, contrasted with \$985 when a harder money policy was being pursued last June.

• The Victory 2½s of Dec. 15, 1967-72, advanced to \$956.87 per \$1,000 bond, compared with \$898.12 in June.

• Reflecting demand heightened by the Treasury's halting sales of its Series C savings notes, which were being purchased as tax anticipation issues, \$1.5-billion of 91-day bills was sold this week at a price equal to an average yield of 1.220%. That's the lowest interest cost on such bills since Aug. 17, 1950, when the figure was 1.174%.

Sale of the Series C notes was halted only 23 days after they had been offered to succeed the Series B notes (BW—Oct. 3 '53, p43), which paid more interest than the Cs. More than \$500-million of the Series Cs were purchased in the 23-day period.

When the Treasury stopped selling them, it cleared the way for the offering of \$2-billion of 2½s without penetrating the federal debt limit of \$275-billion. The offering of 2½s put the debt to within \$300-million to \$400-million of that ceiling.

• **Company Issues**—In the corporate

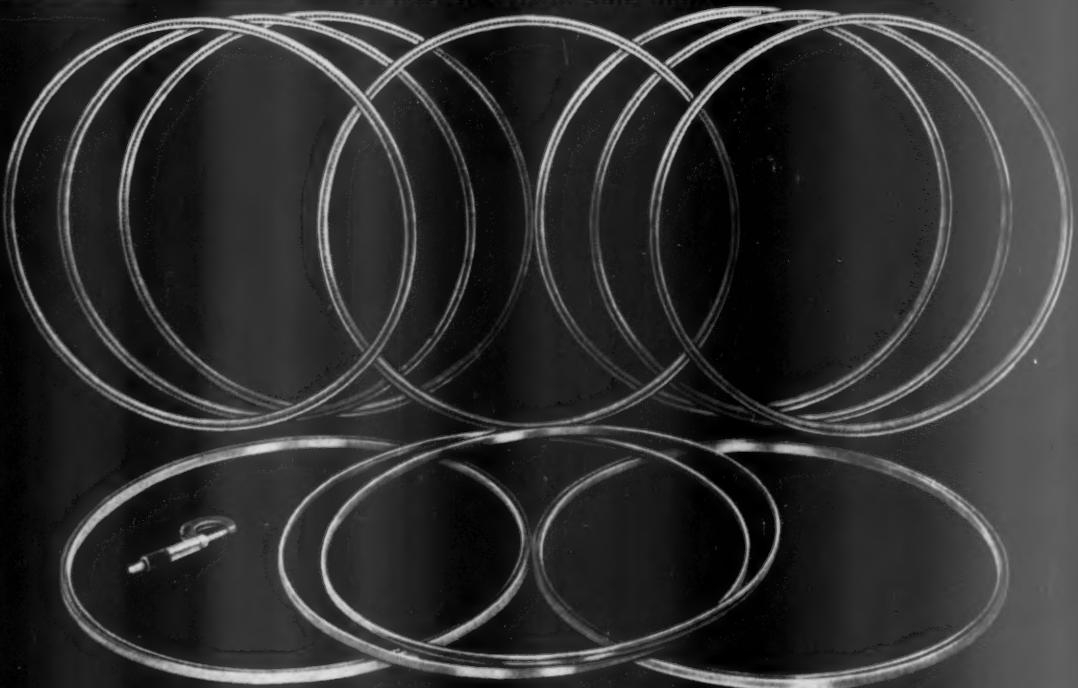


Contact **KAYDON** Muskegon

FOR ALL TYPES OF BALL AND ROLLER BEARINGS: 4" BORE TO 120" OUTSIDE DIAMETER

KAYDON BALL RADIAL BEARING — 16.875" x 17.625" x 0.375"

DESIGNED FOR PRECISION RADAR MOUNTS



ACTUAL SECTION: ONLY $\frac{3}{16}$ " x $\frac{3}{16}$ "



NET WEIGHT: 2 Pounds

WORLD'S THINNEST BEARINGS THIN AS A WEDDING RING...WITH THE PRECISION OF FINE WATCH PARTS

We specialize in large, thin-section, light weight precision bearings for Aircraft, Automotive and Industrial Equipment

Proportionately, that's an understatement! A wedding ring as big as 17.625" outside diameter would be about four times as thick as the actual 0.375" section of these thin KAYDON bearings...and even the finest watch parts, enlarged proportionately, probably would not have the precision tolerance to which these bearings are consistently finished. • These are by far the thinnest ball bearings ever made in this large diameter. KAYDON has developed the facilities and special techniques vital to such precision production.

Precision miracles in extremely large bearings of

unusually thin section have become routine achievements at KAYDON. In addition to unique thinness that conserves space and weight, other outstanding features have been embodied in many special KAYDON bearings...for instance: Flame hardened bearing races drilled, tapped and gear-cut by the KAYDON process eliminate costly auxiliary parts, help improve machine design and performance, and make possible more compact, lighter machines of greater capacity.

For unusually large, light weight, thin section bearings, contact KAYDON of Muskegon.

KAYDON
THE
MUSKEGON, MICHIGAN
ENGINEERING CORP.

KAYDON Types of Standard and Special Bearings:
Spherical Roller • Taper Roller • Ball Radial • Ball Thrust
• Roller Radial • Roller Thrust • Bi-Angular Bearings

PRECISION BALL AND ROLLER BEARINGS



DODGE REPORTS tell you daily, what's coming up in new construction.

Dodge Reports tell you *who* to talk business with, *when* to see him and *what about*.

Dodge Reports save your salesmen's time otherwise spent beating the bushes to locate active prospects or chasing down idle rumors.

Dodge Reports give you *vital* information on opportunities in new construction you might otherwise never hear of.

For 63 years Dodge Reports have made it possible for most of Construction's top firms and salesmen to reach the right people at the right time to do business. They can do the same for you. Write TODAY for your free copy of "Dodge Reports, How to Use Them Effectively."

DODGE REPORTS

Dept. B5321, 119 West 40th Street, New York 18, N. Y.
Timely, Accurate, Construction News Service East of the Rockies
THE FIRST STEP IN EVERY SALE



TRAVELETTER

How do YOU handle TRAVEL EXPENSES???

Prentice-Hall, Bauer & Black Div. of the Kendall Co., Wm. Wrigley, Jr., scores of leading corporations, for years have used TRAVELETTERS because they

- ✓ ELIMINATE expense checks
- ✓ IMPROVE expense procedure
- ✓ LESSEN internal costs
- ✓ CONTROL travel expenses
- ✓ INCREASE productive time
- ✓ MINIMIZE cash advances

You'll be amazed at the advantages your company and traveling personnel will enjoy by using TRAVELETTERS! Write for information.

TRAVELETTER CORPORATION
Since 1894
GREENWICH, CONN.



Since this, Baltimore's largest hotel, is normally favored by most visitors, we suggest that you write or teletype BA263 for reservations.

field—reflecting the trend toward easy rates plus the volume of money still in institutional hands, seeking investment—\$30-million of Public Service Electric & Gas Co. 30-year 3½% was publicly offered at a price to yield 3.18%. Last month, similarly rated and higher-rated investment-grade bond offerings were sold at prices affording buyers yields in a 3.69%–3.33% range.

This demand for bonds, backed by huge chunks of cash in institutional hands awaiting investment, has been an important easy money factor. So has the relatively small volume of offerings in recent months—both corporate and municipal.

Many think it would be particularly hard to sell tax-exempts at current yields if all the towns, cities, counties, states, turnpikes, and other political subdivisions desiring money were suddenly to descend in force. As it is, they're holding back.

This week's offerings are illustrative. Corporate bond issues being marketed aggregate only around \$100-million, and major borrowings by local governments are only slightly over \$100-million.

Volume of any appreciable size would bring competitive forces into play. Those unable to get loans at current rates would simply make their interest rates more attractive by boosting them.

• **Pendulum**—Signs that the drop in money rates has been attracting the eyes of would-be borrowers began to show up this week in the municipal market. Monday saw \$334-million of new issues slated for offering within the next 30 days. Just a week ago, reports the Daily Bond Buyer, only some \$159-million were scheduled for sale in the next 30 days.

No reduction in the prime bank rate is expected at present—or, probably, in the near future. Bankers point out that as a rule the prime rate tilts downward only when borrowers can pick and choose.

This doesn't seem to be the case—even though bank business loans aren't mounting so fast as many bankers had earlier expected. The current New York prime rate is 3 ¼%.

The Pictures—Myron Ehrenberg—26; Harris & Ewing—158; I.N.P.—130 (lt.), 140, 155 (bot.); Bob Isear—30, 31, 150; M. Jaffe—131 (rt.); I. D. Lindenthal—64, 65, 66; Stephen Michael—41; Edith Miller—48, 49; Geo. Rodger—134 (lt.), 135 (top rt.); United Press—134 (top), 135 (bot.), 142; Wide World—61, 155 (top).



800 MILLION

TO MEET THE INCREASING DEMAND for aluminum, we are now expanding our production capacity to over 800 million pounds of primary aluminum a year.

When this expansion is completed next year, we will have the capacity to produce close to 30% of all the aluminum made in this country. This will be two and one-half times as much as the whole industry produced prior to World War II.

We are proud to be the fastest growing major producer in an industry that is revolutionizing American manufacturing—and American living. Aluminum is taking the place of other materials in thousands and thousands of useful products—making these products better—and cheaper.

Because of aluminum, a brighter future lies ahead. We are continuing to expand—and to work with manufacturers to turn aluminum's unlimited opportunities into realities.

Kaiser Aluminum

America's fastest growing major producer of aluminum

BUILT FOR INDUSTRIAL POWER NEEDS EVERYWHERE!



Day-in, day-out! . . . developing maximum horsepower with a minimum of down time and at minimum operating cost! That's the outstanding record of Chrysler Industrial Engines on the job!

For Chrysler Industrial Engines are built *solely* for industrial use! They are designed and engineered to meet the specific working re-

quirements of each type of equipment they power. Chrysler Industrial Engines can also be adapted to special regional operating conditions.

A letter of inquiry will bring an engineer well qualified to discuss your particular application. Address: **Industrial Engine Division, Chrysler Corporation, Trenton, Michigan**



CONSTRUCTION



Chrysler Engines Power:
Ditching Machines • Cranes
• Truck Mixers • Shovels •
Loaders • Yards • Road
Pavers • Concrete Mixers
• Crane Carriers • Scoop
Tractors

INDUSTRY



Chrysler Engines Power:
Air Compressors • Pumps •
Hoists • Derricks • Tractors •
Generators • Arc Welders •
Baling Machines • Winches
• Conveyors • Tackle Blocks

FARMING



Chrysler Engines Power:
Tractors • Combines • Hay
Choppers • Gang Mowers
• Spreaders • Pumps • Feed
Mills • Irrigation Equipment
• Orchard Sprayers •
Sprinklers

OTHER FIELDS



Chrysler Engines Power:
Locomotives • Fire Pumps •
Motor Coaches • Drilling
Equipment • Pulp Machines
• Snow Plows • Oil Well
Pumps and Drillers • Street
Flushers • Air Conditioning
Equipment

PERSONAL BUSINESS

BUSINESS WEEK
OCT. 31, 1953



Life insurance means more these days than just security for your family. It can have an important effect—good or bad—on your tax problems.

Present tax rates make it almost impossible to build up family capital through savings alone. Life insurance will help, by easing the heavy hand of taxation, in three ways:

- **Interest is tax-free.** Say your investment in insurance grows with interest compounded at 2½%. If you're in the 30% tax bracket, you would need an equivalent investment of 3½% to net the same elsewhere. In the 50% tax bracket, you'd need a 5% yield.

- On the installment method of payment, **interest on the insurance proceeds can be received tax-free**—whether you or the beneficiary selects the installment method. (Note that interest received under the "interest only" option is fully taxed.)

- **Lump-sum insurance proceeds are received tax-free.**

But life insurance has its tax woes, too. You can't deduct premiums from your federal tax. (Some states allow such a deduction.) Estate taxes take a bite from the proceeds.

Ordinarily, these factors can hit the high-income man hard.

Take a man who's in the 50% income-tax bracket and in the 33½% estate-tax bracket. First, he would have to earn twice the premium to get the dollars for the premium. On top of that, he would have to carry \$150,000 in insurance to have his family collect \$100,000 after estate taxes.

There is a way to cut the load—have a close relative own the policy and pay the premiums. Thus your wife can take out insurance on your life—with her own funds. Children or parents can do the same thing. That way, the proceeds won't be taxed in your estate.

There's one catch in this: You can't give your relatives the money, then have them take out the policies.

Study the tax factors involved before you cash in any policies. Depending on the value, you may or may not have to pay taxes.

- You won't have to pay if the cash-surrender value is no more than the premiums you have paid in.

- You will have to pay—on the excess only—if the cash value exceeds what you have paid to the company.

A similar situation exists in exchanging policies. If the value of a new policy runs higher than the premiums you've paid for the old one, a tax is due. "Value" means what it would cost you to get the new policy.

Cashing in endowment policies can be especially tough, taxwise. If you make a choice on how payments are to be made after the policy matures, you pay tax on the excess of the proceeds over premiums.

Here's the way to avoid the tax: Before the fixed maturity date of an endowment policy falls due, elect to take the proceeds in a specified number of installments. You owe no tax until the sum you have received

PERSONAL BUSINESS (Continued)

BUSINESS WEEK
OCT. 31, 1953

is more than the total premiums paid—regardless of whether interest is added.

Moreover, the principal and interest still with the company at the time of your death go tax-free to your beneficiary.

You get a similar break if you elect—before the maturity date—to take annuity payments instead of installments. You then include in your taxed income each year only 3% of the total premiums paid until you recover the amount that you actually paid in.

For example: Say the annuity cost you \$100,000 in premiums. You receive annual payments of \$10,000. Include \$3,000 of each payment (3% of \$100,000) in income. The rest (\$7,000) is excluded from taxation. Only after the \$7,000 payments equal your cost of \$100,000 are further annuity payments fully taxed.

Note that you can sell an endowment policy—and thereby avoid being fully taxed. Then you might have no more than a 26% capital gains tax on the gain.

Men's fashions show a sprightlier trend this fall. Main reason is the growing popularity of the fancy odd vest. Tattersalls, corduroy—even brocades and embroidered silks have switched from a daring novelty to an accepted style.

Neckwear, too, tends to be brighter and gayer. You'll find semibold prints, themed prints, and highly colorful screenwork displayed more prominently on tie racks.

By contrast, **suitings run darker**—charcoal greys, oxfords, blacks, and browns. And you'll find more double-breasted suits around—they're on the way back.

Big change for cruise clothes this winter will be the predominance of walking shorts—and knee-length hose. (It's permissible to wear ankle-length socks if you wish.)

Expect accessories to follow the trends. Vests will bring fancy watch fobs and chains. Your wrist watch will be no drawback; you'll be urged to buy and wear fobs attached to lockets, knives, identification disks.

And if you're feeling bold, consider for evening wear a bow tie made of mink (\$10), Alaskan seal (\$7.50), or leopard (\$7.50).

Note for hunters: Rain has come just in time to parched northeastern woods. That opens most woodlands closed because of forest-fire hazard.

And it means better hunting. Rain has quieted down dried leaves. It will also get birds like woodcock out of swampy areas, where dog work is almost impossible.

A new device called the "Servicator" keeps track of maintenance chores on your car. Mounted on the rear-view mirror, it records the number of hours the engine has run.

After 10 hours, it thrusts out a card telling you to check tires, water in battery, and oil. Other cards appear at 60 and 300 hours to remind you of other services. It is made by Carter & Galantin, 105 W. Monroe St., Chicago 3, Ill.

Contents copyrighted under the general copyright on the Oct. 31, 1953, issue—Business Week, 330 W. 42nd St., New York, N. Y.



FACE VALUE PLUS...WITH *Lotol*

There's more to these masks than facial expression! It's Naugatuck's Lotol®—a special latex compound used by Topstone, one of the nation's largest makers of masks and puppets. And look at the pluses it gives!

Plus flexibility! Slush molded Lotol has amazingly life-like feel and resilience...allows twisting, stretching, and contorting into all sorts of grins and grimaces. And it prevents permanent distortion from squashing during packing and shipment.

Plus toughness! These masks will take all kinds of party play without "losing face". They won't pull apart or stretch out of shape. And they can be tumble-dried after molding

with no fear of harm.

Plus moldability! Thanks to Lotol's faster film-forming action, slush molding is speeded up considerably. And Lotol reproduces mold details as faithfully as it does quickly. It can be supplied in almost any color, easily hand painted, and is harmless to the skin.

Consider the product possibilities Lotol offers *you*. In bonding, casting, dipping, spraying, and molding applications, Lotol compounds have opened new avenues of profit for manufacturers all over the nation. Find out more about Lotol by writing on your letterhead to the address below.

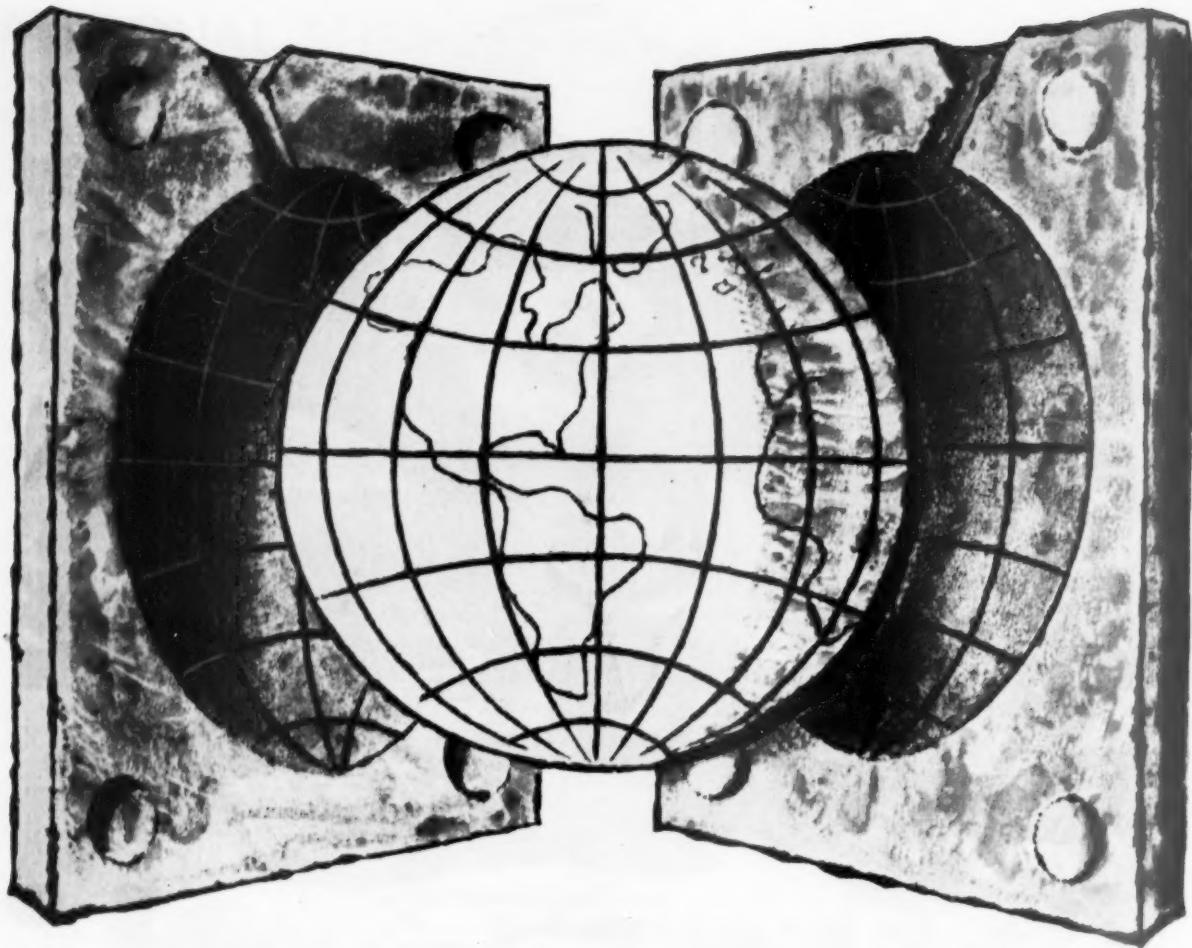


Naugatuck Chemical

Division of United States Rubber Company

510 ELM STREET, NAUGATUCK, CONNECTICUT

BRANCHES: Akron • Boston • Charlotte • Chicago • Los Angeles • Memphis • New York • Philadelphia • IN CANADA: Naugatuck Chemicals, Elmsira, Ontario



Shell Molding Opens a New World!

YESTERDAY saw molten metal cast in cumbersome, hard-to-handle sand molds.

Today a new world is emerging from a thin shell of sand bound together with phenolic resins. This is the world of shell molded castings—economical, amazingly precise and free from flaws.

As a leader in creative chemistry, Reichhold is reaching out to the challenge of this great new world. It is expanding its facilities to meet the ever increasing demand for phenolic

resins created by the shell molding process.

In the foundry industry, as in many other fields of enterprise, Reichhold continues to pioneer . . . to perfect . . . and to produce. So it is that RCI has plants around the world—wherever basic raw materials are found . . . wherever industry needs its products!

REICHOLD CHEMICALS, INC.

630 Fifth Avenue, New York 20, N.Y.

Synthetic Resins • Chemical Colors • Phenolic Plastics • Phenol
Glycerine • Phthalic Anhydride • Maleic Anhydride
Sodium Sulphate • Sodium Sulphite

Creative Chemistry...

Your Partner

in Progress

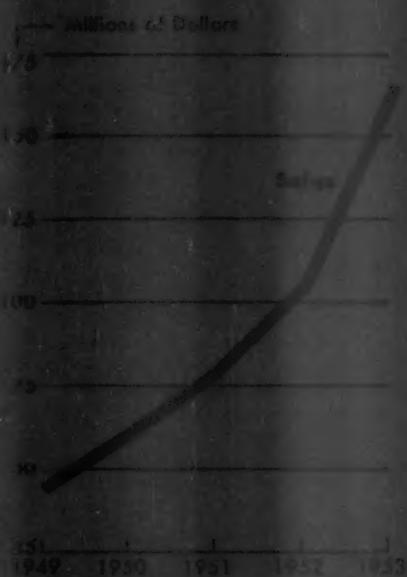
REICHHOLD



MANAGEMENT

Carrier Corp.

Has Been Doing More Business Than It's Organized for . . .



Because It Has a Lot of Separate Teams to Ride

Room Air Conditioners
1949 = 100

Self-Contained Units
1949 = 100

Ice Cube Makers
1950 = 100

Especially

Residential Air Conditioners
1950 = 100

So Carrier
Had to
Divide 'Em
Up by . . .

Reorganizing for an Exploding Market

Delegating full responsibility in all phases of each product group frees Carrier's top men for big thinking.

As much as anything else, the reorganization of Carrier Corp. that takes effect next week is a public confession that Cloud Wampler, president, is only human.

Starting Nov. 1—the first day of its 1954 fiscal year—Carrier officially becomes a decentralized product-line organization.

This setup goes a long way toward untangling a complex system of operating functions that had grown up over the years. It was manageable when volume was \$46-million a year, as it was in 1949, but it became progressively harder to handle at the top as the air conditioning boom sent volume soaring to \$107.7-million last year.

As one of his directors told Wampler: "Cloud, you're trying to be chairman, president, and general manager,

You're a damn good man, but no one is that good."

• **Ceiling Unlimited**—What has happened to Carrier is easily seen in the accompanying charts. Over-all, business has skyrocketed. If you take Wampler's word for it, there's not much ahead to stop the postwar expansion.

The industry as a whole had a volume of about \$14-billion last year. By 1959, says Wampler, the year-round air conditioning end of the business alone will top \$14-billion.

A big part of this year-round business will be residential—installations in new homes and old. For Carrier, that means setting up management machinery for a mass-market product that virtually didn't exist four years ago. The same is true of other products. For example, room air conditioning units have had

nearly all their growth since 1940.

• **No Amazement**—None of this surprises Wampler too much. He can truthfully say that he predicted much of what has happened. He bet on Carrier—one of the few companies that puts practically all of its eggs in air conditioning and refrigeration—12 years ago, when he left a 25-year investment banking career in Chicago to take over at Carrier's Syracuse (N.Y.) headquarters.

But Wampler has to admit that the skyrocket he and his company have been riding, especially since 1949, is somewhat more explosive than they bargained for.

I. Too Big Too Fast

The case of Carrier is a classic example of what U.S. industrial management has been struggling with ever since it snapped out of its depressed state in the 1930s, got shot through a

"Don't Quote Me"



by Reg Ingraham

KIPLINGER STAFF EDITOR

There are lots of pitfalls for the unwary in covering Washington news. One of the worst is the "off the record" device used by many government officials in talking to the press.

Sometimes this device is valuable; sometimes it backfires—mainly because "off the record" means different things to different people. To one official, it means "don't quote me, but here's the lowdown." To another, it means "this is for your guidance, but don't print it."

At Kiplinger's, we avoid the pitfall. We never quote anyone. Our news sources know this, so they talk to us freely, give us all the facts. Then we weigh these facts in the light of related information we have and pass on to our readers an independent judgment of what is involved or in prospect. This means, of course, that we can't hide behind our sources. We accept full responsibility for whatever we print. Which makes us doubly careful.

Another curious phenomenon of journalistic life in Washington is the trial balloon. The average tourist visitor to the nation's capital never knowingly sees a trial balloon go up. For one thing, there are no visible launching sites. But such ascensions are commonplace experiences to Washington newsmen.

A Congressman or bureaucrat, wishing to test public reaction to some pet project or policy, "leaks" a story to reporters—"off the record"—and then sits back to await results. Accepting such stories at face value is another of the pitfalls that beset the Washington press corps.

It's not always easy to recognize a trial balloon on sight, but that's one of the jobs we try to do at Kiplinger's for our readers. Calling such shots as we see them helps Kiplinger subscribers judge the worth as well as the prospects of such proposals. It must work; more than 8 out of 10 subscribers renew year after year.

FREE—to see the kind of help businessmen get from the Kiplinger Washington Letter, mail this coupon today for copy of the current weekly Letter.

KIPLINGER LETTERS

1729 H Street, N.W. Dept. B-1
Washington 6, D.C.

Name.....

Address.....

City..... Zone..... State.....

cannon in the '40s, and landed, in the '50s, in the lushest marketing era in history.

One phrase describes the predicament: too big too fast.

This ailment has caused dozens of overgrown companies to reorganize, so Carrier isn't unique. Carrier does show, unusually clearly, the main problems:

Planning. How does top management find time to run the business today and still make certain it will be a vigorous business tomorrow?

Control. How does it keep track of a host of products, each with a sales curve that backs up its claim for more and more attention?

Responsibility. In the hustle of expansion, with some product sales expanding like popcorn, how does a company focus responsibility on someone to nurse along the weaker products that no one wants to fiddle with?

• **Old Setup**—To help find answers to these questions, Carrier called on C. L. Stevens of the Harvard Business School as a consultant. Stevens found an old-line organization pulled together at the top through catch-all functions of executives.

There was, for example, a vice-president of manufacturing, in charge of the production of everything Carrier made—large or small, for whatever market. Other vice-presidents were similarly in charge of sales, engineering, and other functions—all of them cutting across product lines, with no one clearly responsible for any product or group of products.

How to change this setup was fairly obvious. As Wampler puts it, "There was beautiful logic in our reorganization."

• **Fact of Life**—The logic arises from the fact that Carrier does two kinds of selling: (1) directly to customers or contractors, (2) through dealers and distributors.

The first method is used for the heavy stuff Carrier makes practically to order. It takes lots of engineering savvy, plus a personal approach.

The second is a merchandiser's job. The big problem is to tailor things like room air conditioners for mass markets.

By 1944 it was obvious that the two systems weren't compatible in a growing business. So the sales function, under a vice-president, was split, with a manager for direct sales and another manager for dealer sales.

• **Slow Change**—That laid the basis for the present change. But, up to 1952, little was done, because everybody was too busy meeting daily operating problems. "We didn't know if we were on foot or on horseback," Wampler says.

As a stopgap measure, Carrier tried product management committees, one for every Carrier product. Sales, engi-

neering, and manufacturing made up each team. That worked for a while, but was quickly outgrown.

The logic of decentralization kept preying on Wampler's mind. He could see the organization hampered by delays in decisions, lack of product focus, and an overspecialization of management personnel that left few people in the company with an over-all view.

Then, too, there was Korea and a new boom, plus growing competition.

• **Whole Hog**—"We could have spun off products or product groups one at a time," says Wampler, "but I finally decided to shoot the works."

Today, Carrier is being reorganized in three main divisions and an international division. Each main division is headed by a general manager, who is responsible for everything connected with a group of products that are marketed similarly.

The three major divisions are: (1) machinery and systems, for heavy stuff that is largely custom-built; (2) unitary equipment, which means room air conditioners, self-contained units, residential air conditioners, all of which are sold through dealers and distributors; (3) allied products, which includes unit heaters, food freezers, ice cube makers, and the like. Managers of the first two divisions are vice-presidents.

• **Down the Line**—Within each division, there's a department manager for each product. This manager is accountable for profit and loss; he has full responsibility under the division manager for getting his product manufactured and sold effectively.

Each division also has a sales manager for the whole division, and a comptroller. Wampler keeps finance, public relations, personnel, and legal departments of the company under his own wing. All the rest of the company executives report to William Bynum, Wampler's executive vice-president. That goes for the company's top management staff in engineering, production, and marketing.

II. Selling the Idea

Over the past two years, Wampler's most challenging job has been to sell this basic plan to the rest of his organization. At the policy level, it was easy for executives to see that change was necessary. But further down the line, the clearness of the need became fuzzed with human feelings of resistance to change and of "What happens to me in this new setup?"

Wampler admits he had to talk, man to man, with some executives to convince them they wouldn't be losing authority, prestige, or chance for advancement. On the whole, though, he feels that he got surprisingly good companywide cooperation by putting

Why pay for Replacements Over and Over and Over?



GLAZE WITH **PLEXIGLAS**

It isn't the price of glazing material that makes window-replacement costly. The big item is labor and factory overhead, every time you have a broken pane replaced. When you pay for this over and over again in high-breakage areas, maintenance costs go up fast.

You can prevent frequent breakage and cut maintenance costs way down by glazing with PLEXIGLAS® acrylic plastic. This tough, light weight, *outdoor plastic* withstands the severe service conditions of industrial plants—impact, twisting, and vibration.

In addition, PLEXIGLAS:

- ... increases safety of personnel.
- ... eliminates need for expensive, hard-to-maintain, protective wire screens.
- ... is available in transparent and translucent colors for the reduction of solar heat and direct sky glare.

We will be glad to send you the names of dealers in your vicinity.



PLEXIGLAS is an ACRYLIC PLASTIC.
It should be installed and maintained as described in our brochure, "Window Glazing with PLEXIGLAS". Copies are available promptly on request.

For information on the performance of acrylic plastic in simulated A-bomb blasts, copies of a report, "Shock Tube Tests of Glazing Materials" are available from the U. S. Department of Commerce, Office of Technical Services, Washington 25, D.C. Price \$1.00. Ask for OTS Report PB-111111.

Canadian Distributor: *Crystal Glass & Plastics, Ltd.*, 130 Queen's Quay at Jarvis Street, Toronto, Ontario, Canada.

CHEMICALS



FOR INDUSTRY

ROHM & HAAS
COMPANY

WASHINGTON SQUARE, PHILADELPHIA 5, PA.

Representatives in principal foreign countries



ARTERIES OF INDUSTRY...

It's just a piece of hose . . . one of hundreds of types and sizes in use today . . . but where would industry and commerce be without it?

Hose is common, yet complex. Into the tube, carcass and cover of these flexible pipelines may be blended natural or synthetic rubber, plastics, textiles, wire and a wide variety of chemicals. When the ingredients are properly combined and processed, these arteries of industry will withstand high pressures, abrasion, flexing and temperature extremes . . . while handling air or gases, acids or alkalies, oil or vinegar, mud or molasses, steam or sand.

PULSEBEAT OF PROGRESS...

More important than the ingredients of industrial hose is the ingenuity of the myriad of scientists and engineers whose ceaseless search for new and better products is the heart of America's progress.

And vital to the circulation of their discoveries is the method of making them known . . . America's all-seeing, all-hearing and reporting Inter-Communications System.

THE AMERICAN INTER-COM SYSTEM...

Complete communication is the function, the unique contribution of the American business press . . . a great group of specially edited magazines devoted to the specialized work areas of men who want to manage better, research better, sell better, buy better.

COMMUNICATION IS OUR BUSINESS...

The McGraw-Hill publications are a part of this American Inter-Communications system.

As publishers, we know the consuming insistence of editors on analyzing, interpreting and reporting worthwhile ideas. We know that businessmen, in order to keep abreast of their jobs, subscribe to—pay for—McGraw-Hill magazines edited for their specific business interests.

And, as publishers, we make the advertising pages of our magazines available to advertisers for featuring the products and services they offer in the interest of increased efficiency and lower production costs . . .

. . . for the editorial pages tell "how" and the advertising pages tell "with what".

McGRAW-HILL PUBLISHING COMPANY, INC.



330 WEST 42nd STREET, NEW YORK 36, N.Y.



HEADQUARTERS FOR BUSINESS INFORMATION



Strain without STRAIN

Filtration—the separation of finely divided solid materials from liquids—is a vital processing operation in the manufacture of chemicals, pharmaceuticals, food-stuffs, beverages, textiles, petroleum derivatives and scores of other widely used commodities. Plants all over the United States, and in Europe and Latin America as well, are cutting labor and operating costs in their filtration processes by using Niagara Pressure Leaf Filters.

Made by a division of American Machine and Metals, Inc., Niagara Filters handle large volumes at high speed, increase plant capacity, eliminate the drudgery and high cost of old-fashioned filtering methods.

Other American Machine and Metals, Inc. products: U. S. Gauges, Gotham Instruments, Troy Laundry Machinery, Riehle Testing Machines, De Bothezat Fans and Ventilating Equipment, AutoBAR Liquor Dispensers, Manganese, Lead, Zinc, Silver.

AMERICAN MACHINE AND METALS, INC.

Woolworth Building, New York 7, N. Y.



9 Closely Knit Divisions

EVANSTEEL

SAFETY HOOK

closes and locks when load is applied. Tensile strength 125,000 to 150,000 p.s.i.

Safety factor over 7 to 1. Any type crane connection.



WIRE ROPE SOCKET Over 1,000,000 in use without one recorded service failure.

Write for Bulletin

CHICAGO STEEL FOUNDRY CO.
1722 South Kedzie Avenue • Chicago 32, Illinois
Manufacturers of Alloy Steel for over 45 Years

usAIRco

UNITED STATES AIR CONDITIONING CORPORATION
DEPT. BW, MINNEAPOLIS 14, MINNESOTA

- Heating
- Ventilating
- Refrigerated Air Conditioning

Use "clues"

when you want to reach the executive market. Write for information.

his people to work reorganizing themselves.

After a general plan had been O.K.'d early this year, Wampler set up committees to figure out the details of transition. These groups worked out 1954 budgets that would fit a product-line setup; they solved problems of personnel handling, sales, purchasing, factory engineering, quality control. In the end, it was Wampler's basic idea but his organization's plan.

• **Exhibit A**—In selling his staff on the need for reorganization, Wampler could point to a couple of cases where the product-line grouping was superior.

In 1950, Carrier had three poor relations in its line, products that nobody seemed to care about. These were the unit heaters, food freezers, and the new ice cube makers.

Wampler lumped these three stumbling items into the new allied products division, named a key man as division manager, and turned him loose. The division had its own manufacturing space, had full independence in pricing and marketing.

Results were dramatic. For the previous five years, Carrier had lost \$2-million in all on freezers; the production line was shut down for weeks before the new division took over. In the next year, 1951, the division was in the black. Food freezers and unit heaters—the two weakest sisters—were netting 6.9% profit; in 1952, this rose to 11%. From 3% of company sales in 1949, the product group went up to nearly 10% in 1952.

• **Exhibit B**—Of course, Korea and the new buying boom helped the allied products division make this record, but the rest of the company was sufficiently impressed. And Wampler's case was clinched by a different type of problem that popped up only this year.

A new model of a Carrier product hit the market with mechanical bugs still in it, and buyers started screaming. Wampler was able to move fast. He cut that product loose from the old organization setup, delegated the problem to a special management team, and was working out problems in one week that would have taken the cumbersome older organization a month.

Says Wampler: "The mistake was almost worth it to show our people what this product-focused type of management can do."

III. Ready to Go

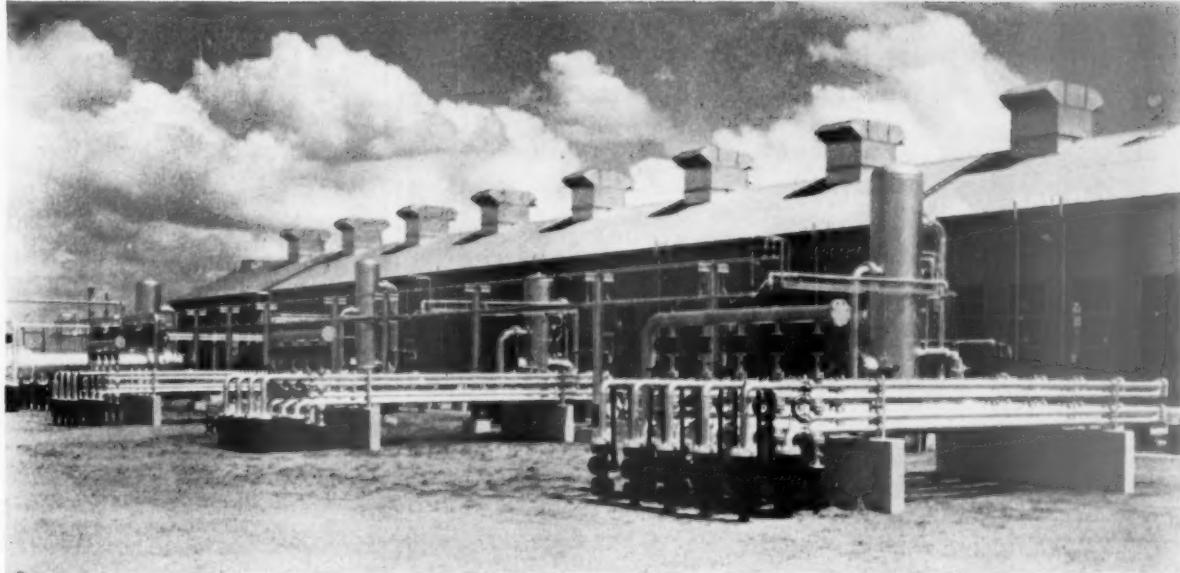
This week the physical changes in the management setup are pretty much behind Carrier Corp. The general managers of divisions are ensconced in new quarters near their production lines; budgets are all set (during the transition, the accounting department had to make up sheets on both the old and

help wanted

- every business man needs help—and needs it badly—at some time or other.
- If you have a business service that will help America's business executives—the readers of **BUSINESS WEEK**—then tell them through the Business Services Section of "Clues."
- Just write Classified Division,
BUSINESS WEEK, 330 W 42nd St, NY 18

Assure Top Efficiency

in your plant with



BROWN FINTUBE *Sectional* **HEAT EXCHANGERS**

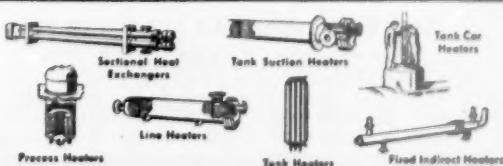
● Avoid the loss in efficiency that results from just a few thousandths of an inch of deposit on the tubes, by using Brown Fintube Sectional Exchangers for every heating and cooling service.

The longitudinal passages of Brown Fintube Sections control the material flow, eliminating baffles and the back eddies that encourage fouling. Their greater heating surface — 2 to 8 times that of bare tubes — permits more BTUs to be transferred at lower temperature per square foot of surface, minimizing "coking" and charring. Brown Fintube Sections are easy to clean — and — by simply manifolding a few extra sections into the unit, one stream after another can be taken off line for cleaning while the rest — always thoroughly clean — carry the unit's full rated capacity, year after year — without any shut-downs.

Efficient heating, is only one of Brown Fintube's many advantages. You'll find full details in our Bulletin No. 512. It will give you ideas.



**BROWN
FINTUBE CO.**
Elyria, Ohio

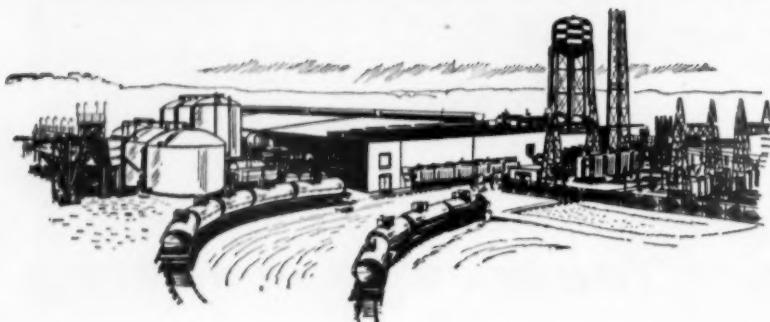


NEW YORK • BOSTON • PHILADELPHIA • PITTSBURGH • BUFFALO • CLEVELAND • CINCINNATI • DETROIT • CHICAGO • ST. PAUL • ST. LOUIS • KANSAS CITY
MEMPHIS • BIRMINGHAM • NEW ORLEANS • SHREVEPORT • TULSA • HOUSTON • DALLAS • DENVER • LOS ANGELES • SAN FRANCISCO • and ST. THOMAS, ONT.

CHLORINE PLANT for LONG TERM LEASE

MUSCLE
SHOALS
Chlorine Plant
Muscle Shoals
Alabama

**Designed to Manufacture
475 TONS of Finished Products Daily**



The Muscle Shoals Chlorine Plant located on approximately 300 acres in Northwest Alabama in the Tennessee Valley is now being offered for long term lease. The plant was completed in 1952 by the Monsanto Chemical Company under the supervision of the U.S. Army Corps of Engineers.

The plant is designed to produce approximately 225 tons of chlorine and 250 tons of 50% to 70% caustic solution daily, by the Monsanto-DeNora Mercury Cell process.

Excellent transportation facilities serve the plant which is currently being maintained in standby under power.

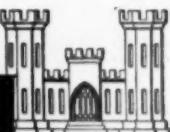
A large stock of operating supplies and spare parts is available for use by the successful lessee.

SEALED PROPOSALS FOR LONG TERM LEASE ARE BEING SOLICITED

Detailed information, arrangements for inspection and proposal forms may be obtained from the District Engineer, Mobile District, Corps of Engineers, P. O. Box 1169, Mobile, Alabama.

CORPS OF ENGINEERS

U. S. ARMY
WASHINGTON, D. C.



new basis), and the product lines are on their own.

Questions remain—on salaries, prices, new product authority. Manufacturing facilities still overlap, and that's unavoidable until new plants are built (one is already announced for somewhere in the South). Meanwhile, production space must be shared by product lines, but the coordination can be done much further down the chain of command than it used to be.

• **President's Job**—How about Wampler? Ever since he became Carrier's top man, he has been tied down to details. He has made operating decisions and has kept a close, day-by-day watch over every phase of the business.

Much of that will go by the board—although Wampler and executive vice-president Bynum admit that one of their problems will be to keep Wampler out of detail. Says Bynum: "He has a tremendous curiosity."

One thing is certain. Wampler will always know what's going on. Every Monday morning he will still have his officers' meeting. This group gets detailed economic reports from the field on a special Carrier form, then discusses a prepared agenda. Minutes are recorded, then indexed for Wampler.

• **Time to Dream**—There'll be fewer operating problems at these meetings. Wampler says he can cut 50% of company paper work, too. But he will still be sending out each week a list of unfinished business, each item assigned to a specified man on his top-level staff. Wampler will want to know each item is attended to—the Brazilian tax matter, the Thompson Road plant's crossing situation, credit insurance, maximum employment in Syracuse, and so on.

On the whole, though, Wampler will gain time to dream—"practical dreams," he says. He'll have more time to devote to the areas he knows best—forward planning, finances, and what he calls "topside contacts."

In his words: "Now I'll be using my best talents, not my poorest."

AMA Finds More Stress on Education

The American Management Assn. has been in business for 30 years, but last week's 1953 report makes it plain that never have executives been more intrigued with the idea of educating themselves and their people.

In the last year, 40,000 persons attended 13 major AMA conferences and numerous exhibits. Another 5,000 attended seminars, briefing sessions, and courses. More than 1,500 business leaders served as speakers, discussion leaders, or meeting chairmen at these events.

The AMA Management Course, a 25-day course in the basic principles of management, completed its first full year. The course, held at the Hotel Astor in New York, drew nearly 500 executives, and at the end of the year the roster showed that over 300 companies had been represented.

MANAGEMENT BRIEFS

General Electric won't move its executive offices from their present site in midtown Manhattan to Valhalla, in suburban Westchester County, for at least five years. President Ralph J. Cordiner said the move has been postponed: (1) to give more time to plan and to determine what facilities will be required, and (2) to give employees a chance to arrange for living quarters.

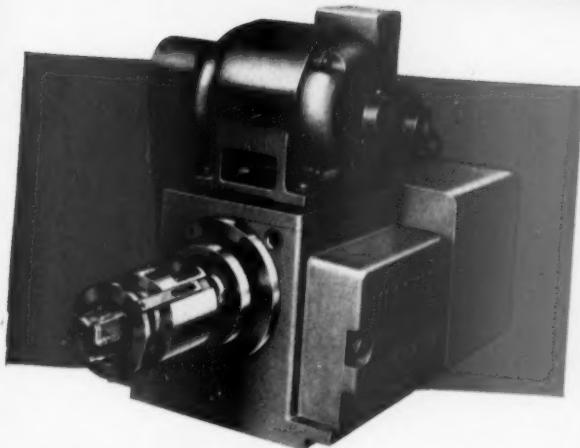
Average cost per employee of industrial relations administration rose from \$48.59 in 1952 to \$61.26 this year, according to a survey made at the University of Minnesota's Industrial Relations Center. The survey reached 165 companies and agencies in 42 states.

Engineers fare well on payday, according to a survey made by the National Society of Professional Engineers. In terms of median annual income: By branches, chemical is tops with \$8,910, civil lowest with \$7,390; by jobs, executive-administrative is highest with \$9,930, production lowest with \$6,960; by field of employment, contractors have a median of \$9,920, while those in education are lowest with \$7,590.

Paper-doll award: Calco Chemical Division of American Cyanamid Co. induces employees to drop ideas into its suggestion box by offering a cutout figure, complete with wardrobe, to all contributors. The cutout, a cartoon figure called Rowdy, has been promoted in the house organ. The idea is to get employees' children to press their parents into making suggestions.

Conferences to come: The first Industry-College Conference will be held Nov. 12-13 at the Greenbrier Hotel, White Sulphur Springs, W. Va. On the agenda: industrial scholarships, co-operative work-study programs, research, and information exchange. Typical conferees: Ford's Ernest R. Breech, Penn State's Dr. Milton S. Eisenhower. Many university and corporation presidents will attend. . . . A three-day conference on Operations Research in Production and Inventory Control will be held Jan. 20-22 at Case Institute, Cleveland.

INDUSTRY Lives by the



While precision in screw lead probably didn't concern Archimedes, it has taxed the ingenuity of machine designers ever since the time of Henry Maudslay in the early 19th Century.

High precision has often been attained but at a sacrifice in speed of production.

Now comes an idea in Sheffield-Murcley Precision-Pak which achieves both high precision and high production in the cutting of screw threads.

An exclusive in-line precision lead screw on the spindle axis controls its rate of lead travel with inviolate accuracy. No gears or intermediate mechanism to harbor backlash or lost motion.

This is another instance of the helpfulness of Sheffield Research in aiding Industry.

Without modern economical production equipment to assure interchangeability, both the mass production assembly line and today's replacement parts system would be impossible.

Industry lives by the inch.

Murcley Division, The Sheffield Corporation, Dayton 1, Ohio, U.S.A.



SHEFFIELD



"Why don't you talk to the people at Chase?"

A good question for *oilmen* who want a banking service devoted to their specific problems and needs

If you have interests in oil, chances are you've heard something about Chase's Petroleum Department.

Here's what Chase can offer you through this department:

THREE DIVISIONS

First there's information and advice from engineers and geologists — men with practical oilfield experience. It's their job to know the income-produc-

ing capacities of oil properties. Next you get the counsel of economists. They study specific field analyses from the standpoint of over-all conditions and trends in the industry. Then you get the helpful services of credit officers whose sole business it is to make constructive loans.

ALL YOURS

As a Chase customer, you'll find the

staff of this department ready to go to work for you. Once you've had a sample of their service, chances are you'll count on it for quite a bit of guidance. Fact is, as a result of the work of this department, Chase for years has made more loans to the petroleum industry than any other bank.

That highlights services of the Chase Petroleum Department. How to utilize them is explained on the next page.



**...If you decide to talk
to the people at Chase**

The Petroleum Department's Engineering Division (geologists included) will study the property involved. Wherever necessary they'll also consult with independent geologists about the present and potential productivity of your property. Further, they'll check drilling plans, look into the ways and means of transporting crude, and investigate refining costs.

Next, you'll sit down with Chase's "petroleum bankers" who will take the engineering division's data and estimate the cash return you may anticipate from your property.

Then, summing up all known factors and balancing them against up-to-the-minute reports on market forecast and demand, the banking and credit officers will be pleased to discuss financing plans with you.

The important thing to remember is this:

You and your company are assisted through every step of the negotiations by men who know the oil business intimately and have learned to put practical experience in double harness with constructive financial planning.

Any questions? A letter, a telephone call (Hanover 2-6000) or a visit will be welcomed by the Petroleum Department, Chase National Bank, 18 Pine Street, New York 15, N.Y.

It pays to do business with Chase

THE

CHASE

NATIONAL BANK
OF THE CITY OF NEW YORK
[MEMBER FEDERAL DEPOSIT INSURANCE CORP.]

Handling 1,500 Executives

Macy's New York uses a system of regular small-group discussions to keep all the members of its top-heavy management staff pulling in the same direction.

"Does Macy's tell Gimbel's?" has echoed across New York's Herald Square for generations. But when Wheclock H. Bingham took over as president of Macy's New York in 1952, he might well have asked, "Does Macy's tell Macy's?" Intrastore communications, he found, were a long way from what they might have been.

The exchange of information among executives of a department store is a particularly tough problem, because department stores have swarms of executives. Macy's New York, for instance, with 11,000 employees in its main store, four suburban branches, and warehouses, has no less than 1,500 executive personnel (BW-Apr. 11 '53, p.86).

Such a high chief-to-Indian ratio obviously is dangerous if the executives aren't provided with an efficient communications network.

• **Plan and Progress**—So, when Wheclock Bingham came to Macy's New York he was quick to back up a plan the store had just launched. It was called the Executive Discussion Program.

This fall, the program is 18 months old, and Macy's personnel department has distributed a booklet to its executive regiment that tells them what the program has accomplished. President Bingham places his stamp of approval in the booklet's foreword by saying, "the results are impressive."

• **Talkfests**—The gist of the program is this: Each executive is assigned to a discussion group that meets for an hour once a month. At these meetings, the executives exchange information about Macy's policies, practices, and problems. They air their complaints, try out ideas, or just report their observations.

There are now 36 discussion groups with 25 executives in each. This only accounts for 900 people. The rest of the 1,500 either rank too high—that is, they are above the third level of management—or they hold such nonsupervisory jobs as executive secretary. The highest ranking executives in the program are department managers and buyers. The top two levels of management, which are not in the program, include vice-presidents and what Macy's calls administrators.

• **Setup**—An attempt is made to have all facets of the store's operation represented in each group. This means that people come in from the branches and from the Long Island warehouse; they

come from advertising, accounting, shipping, receiving, credit, and so forth. The only restriction is that no two people from the same chain of command may be in the same group. An executive might be less than candid if his boss were at the meeting.

Each group has a permanent chairman. These chairmen make up a committee of their own, which top management calls together from time to time.

• **Group Leeway**—A group may operate with or without an agenda, whichever way it chooses. Last spring management, acting on a suggestion from one group, asked the committee of chairmen whether groups should plan ahead of time what subjects to discuss. The chairmen's answer: an emphatic "no."

Macy's management realized then that the strength of the program is in its flexibility, its informality—and in its group control, rather than control from above. As Fred C. Fischer, Macy's vice-president in charge of personnel, puts it: "We've got to watch it, but we don't want to guide it."

• **Pulling It Together**—Top management does watch the program, and very closely, too. President Bingham goes over the transcripts of the conferences regularly. About four times a year, Fred Fischer reports on the program to the store's executive committee.

The 36 groups are threaded together by a single coordinator who attends all meetings. His job is threefold. First, he gets the answers to a group's questions and brings them back the next month. For instance: In furniture, how big a markdown constitutes a sale?

Second, he carries a group's suggestions or complaints to the proper quarter in top management. Several policy changes can be traced back to discussion groups, among them these: Macy's house organ, the Star, was reactivated; the receiving department broadened the use of cellophane bags to prevent soilage; the delivery limit was raised to \$3.01.

Finally, the coordinator cross-fertilizes ideas. He may give each group a quick look at the standout suggestions, observations, complaints that the whole program has considered in recent weeks. That sets off a discussion. Or he may pass information from one group to another.

• **To the Point**—Keeping discussion in bounds hasn't turned out to be as difficult as Macy's thought it might be. Department store executives are a lively

clues: to the solution of management men's problems.

Published every week—closes 12 days in advance. Rate—\$5.00 per line (\$2.50 per line for positions wanted ads), minimum 2 lines. Allow 5 average words as line; count 2 words for box number. Write for special rates for Business Services Ads. Address box number replies c/o BUSINESS WEEK to the office nearest you. NEW YORK, 330 W. 42nd St., CHICAGO, 530 N. Michigan Ave., SAN FRANCISCO, 68 Post St.

EMPLOYMENT

Positions Vacant

Area Accountant, permanent position for a man with heavy experience in customer accounting in the utility industry. Good educational background in accounting required; college degree desirable. We are a natural gas utility company engaged in production, transmission and distribution in four states. We offer a full program of employee benefits. Apply by mail to: Southern Union Gas Company, Burt Building, Dallas, Texas. Attention: Mrs. Singer.

Prominent, nation-wide management consulting firm with long record of professional accomplishment seeks successful young executives, 28 to 38, with substantial experience in one or more fields: marketing research or sales; manufacturing or industrial engineering; personnel or industrial relations; finance, accounting or control. Requirements — good college records and ability to deal with top management on same level. Positions in Chicago and other leading cities offer unique opportunity for professional and financial advancement; attractive income should equal or better your present earnings. Our consultants identify, analyze and develop solutions to management problems, working closely with client executives. Some travel is necessary; weekends at home. Send brief resume showing age, education, experience and personal background to P-9547, Business Week.

Midwest Executive Desires to Locate in East. 20 yrs. experience includes: chief of standards & methods engrg., for leading chem. producer, plant mgr. of Sheet Metal Co., V.P. & Gen. Mgr. of small truck and road constr. equip. mfg. co. P-9589, Business Week.

Selling Opportunity Offered

Wanted: Manufacturer's representative now handling similar lines to die castings, investment castings, screw machine products, springs, etc. Three territories now open. PW-9500, Business Week.

Positions Wanted

Controller-ready for "tough assignment." National utility, industrial experience all functions, management level. Institute member. Educated Harvard, accounting, finance, law. Relocates, domestic, foreign. PW-9386, Business Week.

Public Relations Exec—Here's a planner and does with top consultant firm, exp. Half dozen blue chip Cos. have paid for his services and liked results. Reliable, yet, 37. Will go with Co. vic. of N. Y. PW-9666, Business Week.

College graduate 43 years old seeks opportunity whereby over 15 years broad industrial procurement experience with leading automotive manufacturer may be used to mutual advantage. Recent management "reorganization" prompts interest for smaller concern offering some degree of security. Will consider any propositions in \$10,000-\$12,000 range. Complete resume and references furnished on request. PW-9592, Business Week.

Economist, construction market analyst, writer, speaker & executive age 38 earning \$9000. Wide business, trade assn. & govt. experience. PW-9543, Business Week.

Navy veteran, age 26, with 2 college degrees and extensive experience in personnel work, advertising and public relations—for past 2½ years very successful manager of fine ladies apparel store—desires increased opportunity, preferably as junior executive or executive in growing company. PW-9576, Business Week.

Mail order Specialist will assume complete management and increase profits mail order business. PW-9584, Business Week.

Mech. Engineer—31, Diversified experience, Design to manufacture. PW-9581, Business Week.

Selling Opportunities Wanted

Texas Manufacturer's Agent desires two or three additional lines. Can handle Louisiana also if desired, established both states address P. O. Box 1311, Houston, Texas.

Selling Supermarkets, Syndicate Chains, Tobacco & Confectionery. Jobbers, Metropolitan New York area, desire additional line. RA-9582, Business Week.

Miami Florida Area Representative. Young aggressive salesman desired to represent lines sold to hotels, restaurants, jobbers or dealers in this area. Well educated, financially responsible sales representative whose character can stand rigorous investigation. RA-9573, Business Week.

Manufacturer's Representative, Southeast, top notch sales record, desires major lines. RA-9568, Business Week.

Manufacturer's agent with Chicago hdqrs.. is soliciting addtl. industrial line. RA-9532, Business Week.

SPECIAL SERVICES

Complete Tooling programs performed on a firm price guaranteed basis. Excellent tool design staff plus 80 skilled tool and die makers at your service. Fast delivery. Large work a specialty. Mechanics Incorporated, Municipal Airport, Bridgeport, Connecticut.

Contemplating foreign trade expansion? Our representatives all over the world are ready to assist you in developing on the spot information. Our clients include manufacturers, exporters, engineering concerns, advertising agencies, industrial consultants, and foreign government. For details, write Overseas Business Services, McGraw-Hill International Corporation, 330 W. 42nd St., N. Y. 36, N. Y.

Unusual Design Service—German scientist specializing in engine and other intricate engineering design problems. No production. Will consider some intricate fixture designing. SS-9574, Business Week.

Complete Tooling programs performed on a firm price guaranteed basis. Excellent tool design staff plus 80 skilled tool and die makers at your service. Fast delivery. Large work a specialty. Mechanics Incorporated, Municipal Airport, Bridgeport, Connecticut.

Registered Patent Attorney

Patent Information Book, without obligation. Pat. Atty. & Advisor Navy Dept. 1930-67. Assoc. Examiner Pat. Off. 1922-29. Gustav Miller, Patent Lawyer, 1035BWS, Warner Bldg., Wash. 4, D. C.

BUSINESS OPPORTUNITIES

Exclusive Franchise Available

To financially responsible men or companies, we offer a limited number of exclusive regional franchises covering an entirely new conception in the merchandising of aluminum roofing as a specialty of its own—considered to be a \$200 million dollar industry. Here is a revolutionary approach both mechanically and from a merchandising standpoint. A patented portable roll forming machine is taken to the job site; the roof is tailor-made—formed—and then applied—all in full view of the customer. Thoroughly covered by patents. Low overhead. Technical knowledge not required. Consumer sales experience essential. Product endorsed by the world's largest producers of basic materials used. All facilities of our staff of specialists at your disposal to insure success. This includes sales aids, promotional material and cooperation, plus engineering assistance. Not a project for manufacturer's agents or for jobbers distributing package items. The approach is direct to the home-owner-consumer. The profit margin is unusually high. Please give outline of finances and business history in first letter. Write Rolliton of America, 714 E. Van Buren St., Phoenix, Arizona.

Wanted: A good patented or unpatented accessory for punch presses for national distribution by a manufacturer of the highest rating in the distribution and manufacture of punch press accessories. BO-9501, Business Week.

Principal of reputable corporation serving the metal trades and aircraft industries is interested in meeting, for exploratory discussion, with controlling interest or principal executive of large aircraft or metal trades plant. Object: Corporate venture to provide mutual returns on capital gains basis. BO-9608, Business Week.

Chicago firm, well established, currently doing a excellent sales job for two accounts servicing general industry on production as well as maintenance business seeks a third line. Our sales engineering group are most capable. Warehousing facilities available if desired. BO-9591, Business Week.

GIFTS

Swiss Watches & Swiss Electric Razors for premiums and promotions—\$3.15 up Catalog, Transworld, 565 5th Ave., N. Y. C.

INDUSTRIAL SITE

Looking for a New Industrial Location? For facts and figures, Tri-City Merchants Association, Inc., Washington St., Leaksville, N. C.

BUSINESS SERVICES

Auto Fleet Sales

ROLLINS FLEET SALES

- We will sell you entire fleets of new cars or trucks and purchase your used units.
- We handle your complete transportation problems.
- We pick up and deliver anywhere in the U. S. Rehoboth, Delaware, Phone 3281

lot, but personnel administrator Forest R. Lombard, says, "The surprising thing is that these groups are really self-policing. If a couple of executives get tangled in a problem that is truly peculiar to them, some one is bound to chime in: 'Why don't you two hash that out later?'"

• Issues—In a meeting of ambitious executives, few issues will come up that don't cross most of their present or future paths. An example: At a recent group meeting, a buyer complained that stock didn't flow into his department fast enough during a big promotion. He'd get the promotion all set, run the advertisements, and then find himself unable to meet demand.

At the meeting were executives from every department that could have any possible connection with such a promotion. They were able to suggest where the difficulty might lie—and they learned a lot about promotions.

Sometimes the question is so complex that it needs top-level experting. When several groups wanted an updating on Macy's famed 6% policy, the expert consulted was Jack I. Straus, president of the store's parent company, R. H. Macy & Co., Inc. Straus met with the committee of chairmen, briefed them on the latest concerning the 6% policy, and the chairmen took the word back to their groups.

Profit-sharing Plans That Boomerang

Profit-sharing plans can boomerang if they aren't handled properly.

The latest reminder on this point was issued by Dr. Marcus Nadler, consultant and economist for the Hanover Bank, New York, at the National Assn. of Bank Auditors and Comptrollers conference in New York last week. He told the 1,600 delegates that schemes to share a company's earnings with all employees may have built-in dangers.

• Hazards—First, a plan that isn't tightly constructed to show up by definite measures of achievement—a better-than-average effort by individuals or departments may come to be considered simply a general bonus. Eventually, employees will consider it part of their base pay. Then it loses its incentive for better performance.

Second, a time may come when there aren't enough profits to share. There's a good chance that employees won't understand this. They'll consider they've taken a cut in pay.

Nadler suggests that profit-sharing be avoided unless there's some way to (1) pinpoint contributions by employees or their departments to the company's benefit and (2) explain clearly to employees how profits and losses are made.

ADVERTISERS IN THIS ISSUE

Business Week—October 31, 1953

AAA ADDING MACHINE CO.	176	ENGINEERING NEWS-RECORD	44-45	PARSONS PAPER CO.	162
Agency—Diener & Dorschind, Inc.		Agency—Buchanan & Co., Inc.		Agency—Wilson, Haight, Welch & Grover, Inc.	
AIR MAZE CORP.	3	Agency—Beatty & Oliver, Inc.	82	PEOPLES FIRST NATIONAL BANK & TRUST CO.	161
Agency—Batten, Barton, Durstine & Osborn, Inc.		Agency—Hammond-Goff Co.	108	Agency—Ketchum, MacLeod & Grove, Inc.	
ALLEGHENY LUDLUM STEEL CORP.	60	Agency—Dentist Advertising Ltd.	76	PERMACEL TAPE CORP.	89
Agency—Walker & Downing		Agency—Johnson, Head & Co., Inc.		Agency—The Aithin-Kynett Co.	
ALLEN-BRADLEY CO.	33	Agency—The Griswold-Eshleman Co.	142	PHILIPPINE AIR LINES	142
Agency—The Fensholt Adv. Agency, Inc.		Agency—Walther Boland Assoc.		PITTSBURGH CORNING CORP.	103
ALLIS-CHALMERS MFG. CO.	115	Agency—Ketchum, MacLeod & Grove, Inc.		Agency—Ketchum, MacLeod & Grove, Inc.	
Agency—Compton Adv., Inc.		PULLMAN CO.	98	PULLMAN CO.	
ALLISON DIV. OF GENERAL MOTORS CORP.	112	Agency—Young & Rubicam, Inc.		Agency—Young & Rubicam, Inc.	
Agency—Kudner Agency, Inc.		R-S FURNACE CORP.	49	R-S FURNACE CORP.	
ALUMINUM CO. OF AMERICA (CHEMICAL DIV.)	57	Agency—The W. H. Long Co.		Agency—The W. H. Long Co.	
Agency—Ketchum, MacLeod & Grove, Inc.		RAILWAY EXPRESS AGENCY	81	RAILWAY EXPRESS AGENCY	
ALUMINUM IMPORT CORP.	74	Agency—Fleming, Smith & Ross, Inc.		Agency—Fleming, Smith & Ross, Inc.	
Agency—G. M. Basford Co.		THE RAULAND-BORG CORP.	80	THE RAULAND-BORG CORP.	
AMERICAN AUTOMATIC TYPEWRITER CO.	46	Agency—George Brodsky		Agency—George Brodsky	
Agency—Frank C. Nahser, Inc.		RAYONIER, INC.	126-127	RAYONIER, INC.	
AMERICAN BLOWER CORP.	128	Agency—Brooks, Smith, French & Dorrance, Inc.		Agency—Brooks, Smith, French & Dorrance, Inc.	
Agency—Brooke, Smith, French & Dorrance, Inc.		RAYTHEON MANUFACTURING CO.	95	RAYTHEON MANUFACTURING CO.	
AMERICAN CREDIT INDEMNITY CO.	90	Agency—Cowan & Dangler, Inc.		Agency—Cowan & Dangler, Inc.	
Agency—VanSaun, Dingate & Co., Inc.		REICHHOLD CHEMICALS, INC.	170	REICHHOLD CHEMICALS, INC.	
AMERICAN HOT DIP GALVANIZERS ASSN.	155	Agency—MacManus, John & Adams, Inc.		Agency—MacManus, John & Adams, Inc.	
Agency—The Albert P. Hill Co.		REMINGTON RAND, INC.	93	REMINGTON RAND, INC.	
AMERICAN MACHINE & METALS, INC.	176	Agency—Leeford Adv. Agency, Inc.		Agency—Leeford Adv. Agency, Inc.	
Agency—Albert Frank-Guenther Law, Inc.		REO TRUCK LEASING, INC.	66	REO TRUCK LEASING, INC.	
AMERICAN PHOTOCOPY EQUIPMENT	117	Agency—William Hart Adler, Inc.		Agency—William Hart Adler, Inc.	
Agency—Irving J. Rosenblom Adv. Agency		REPUBLIC AVIATION CORP.	107	REPUBLIC AVIATION CORP.	
THE AMERICAN WELDING & MFG. CO.	131	Agency—De Garmo, Inc.		Agency—De Garmo, Inc.	
Agency—The Bayless-Kerr Co.		REPUBLIC STEEL CORP.	84-85	REPUBLIC STEEL CORP.	
ATLAS POWDER CO.	15	Agency—Meldrum & Fessmith, Inc.		Agency—Meldrum & Fessmith, Inc.	
Agency—The Aithin-Kynett Co.		REVOLATOR CO.	124	REVOLATOR CO.	
"AUTOMATIC" SPRINKLER CORP. OF AMERICA	110	Agency—La Porte & Austin, Inc.		Agency—La Porte & Austin, Inc.	
Agency—The Robert A. Joyce Co.		REYNOLDS METALS CO.	20	REYNOLDS METALS CO.	
BAKELITE CO. DIV. OF UNION CARBIDE & CARBON CORP.	83	Agency—Buchanan & Co., Inc.		Agency—Buchanan & Co., Inc.	
Agency—J. M. Mathes, Inc.		RHINELANDER PAPER CO.	31	RHINELANDER PAPER CO.	
BALTIMORE & OHIO RAILROAD	13	Agency—Frank C. Nahser, Inc.		Agency—Frank C. Nahser, Inc.	
Agency—The Richard A. Foley Adv. Agency, Inc.		ROBBINS & MYERS, INC.	146	ROBBINS & MYERS, INC.	
BANK OF MONTREAL	144	Agency—Erwin, Wasey & Co., Ltd.		Agency—Erwin, Wasey & Co., Ltd.	
Agency—Doremen & Co.		ROGERS CORP.	176	ROGERS CORP.	
THE BASSICK CO.	105	Agency—The Charles Brunelle Co.		Agency—The Charles Brunelle Co.	
Agency—James Thomas Chirurg Co., Inc.		ROHM & HAAS CO. (PLASTICS DIV.)	173	ROHM & HAAS CO. (PLASTICS DIV.)	
BENDIX AVIATION CORP.	4-5	Agency—John Falkner Arndt & Co., Inc.		Agency—John Falkner Arndt & Co., Inc.	
Agency—MacManus, John & Adams, Inc.		RYAN AERONAUTICAL CO.	43	RYAN AERONAUTICAL CO.	
BLAW-KNOX CO.	71	Agency—Kahn, Barton, Durstine & Osborn, Inc.		Agency—Kahn, Barton, Durstine & Osborn, Inc.	
Agency—Al Paul Leffton Co., Inc.		SAIL-EM BRUSLUS, INC.	3rd Cover	SAIL-EM BRUSLUS, INC.	
BLAUPUNKT FOOD GEAR WORKS, INC.	42	Agency—Bond & Starr, Inc.		Agency—Bond & Starr, Inc.	
Agency—Rothe-Meyer & Finn, Inc.		SCOTT PAPER CO.	51	SCOTT PAPER CO.	
BRIDGEWATER MACHINE CO.	162	Agency—J. Walter Thompson Co.		Agency—J. Walter Thompson Co.	
Agency—Ralph Gross Adv., Inc.		THE SHEFFIELD CORP.	179	THE SHEFFIELD CORP.	
BROWNE FINTUBE CO.	177	Agency—With & Burden		Agency—With & Burden	
Agency—Henry T. Bourne Adv. Agency, Inc.		L. SONNEBORG SONS, INC.	145	L. SONNEBORG SONS, INC.	
BUELL ENGINEERING CO.	121	Agency—Hicks & Grelst, Inc.		Agency—Hicks & Grelst, Inc.	
Agency—Hicks & Grelst, Inc.		SPIERRY GYROSCOPE CO.	23	SPIERRY GYROSCOPE CO.	
BURROUGHS CORP.	11th Cover	Agency—Chas. Dallas Ranch Co., Inc.		Agency—Chas. Dallas Ranch Co., Inc.	
Agency—Campbell-Ewald Co.		STATE OF LOUISIANA	61	STATE OF LOUISIANA	
CAMPBELL, WYANT & CANNON FOUNDRY CO.	79	Agency—Whitlock-Swift, Inc.		Agency—Whitlock-Swift, Inc.	
Agency—Waldie & Briggs, Inc.		TELECOMPUTING CORP.	138	TELECOMPUTING CORP.	
CAPPEL, MACDONALD & CO.	78	Agency—Hal Stephens, Inc.		Agency—Hal Stephens, Inc.	
Agency—Don Kasper Co., Inc.		TENNESSEE PRODUCTS & CHEMICAL CORP.	2nd Cover	TENNESSEE PRODUCTS & CHEMICAL CORP.	
CENTRAL NATIONAL BANK	116	Agency—Cunningham & Walsh, Inc.		Agency—Cunningham & Walsh, Inc.	
Agency—Fuller, Smith & Ross, Inc.		THE TEXAS CO.	24	THE TEXAS CO.	
CHASE NATIONAL BANK, INC.	180-181	Agency—Howard Swink Advertising Agency, Inc.		Agency—Howard Swink Advertising Agency, Inc.	
Agency—Konvay & Eckhardt, Inc.		TRAVELETTER CORP.	164	TRAVELETTER CORP.	
CHICAGO, ROCK ISLAND & PACIFIC RAILWAY	153	Agency—Moore & Co., Inc.		Agency—Moore & Co., Inc.	
Agency—The Caples Co.		THE TREMCO MFG. CO.	159	THE TREMCO MFG. CO.	
CHICAGO STEEL FOUNDRY CO.	176	Agency—Lane, Fisher & Stauffer, Inc.		Agency—Lane, Fisher & Stauffer, Inc.	
Agency—Wamsley & Heer, Inc.		TWIN DISC CLUTCH CO.	152	TWIN DISC CLUTCH CO.	
CHRYSLER CORP.	166	Agency—Spencer Curtiss, Inc.		Agency—Spencer Curtiss, Inc.	
Agency—Zimmet, Keller & Calvert, Inc.		UNITED-CAIRN FASTER CORP.	108	UNITED-CAIRN FASTER CORP.	
CLARAGE FAN CO.	80	Agency—G. R. Humphrey, Alvey & Richards, Inc.		Agency—G. R. Humphrey, Alvey & Richards, Inc.	
Agency—William J. Williams		UNITED GAS PIPE LINE CO.	137	UNITED GAS PIPE LINE CO.	
CLEVELAND ELECTRIC ILLUMINATING CO.	157	Agency—Borrell & Jacobs, Inc.		Agency—Borrell & Jacobs, Inc.	
Agency—D'Arcy Adv. Co.		U. S. AIR CONDITIONING CORP.	176	U. S. AIR CONDITIONING CORP.	
CLUES (CLASSIFIED ADVERTISING)	182	Agency—Jaaffe Adv. Agency		Agency—Jaaffe Adv. Agency	
Agency—H. M. Klingsmith Co., Adv., Inc.		UNITED STATES RUBBER CO.	169	UNITED STATES RUBBER CO.	
THE COOPER-BESSEMER CORP.	35	Agency—Fletcher D. Richards, Inc.		Agency—Fletcher D. Richards, Inc.	
Agency—The Griswold-Eshleman Co.		U. S. STONEWARE CO.	77	U. S. STONEWARE CO.	
CORNING GLASS WORKS	55	Agency—Ralph Gross Adv., Inc.		Agency—Ralph Gross Adv., Inc.	
Agency—Charles L. Rumill & Co., Inc.		UNIVERSAL BALL CO.	124	UNIVERSAL BALL CO.	
CORPS OF ENGINEERS, U. S. ARMY	178	Agency—Robert B. Kampmann Jr.		Agency—Robert B. Kampmann Jr.	
Agency—Gotham Adv., Co., Inc.		VARD, INC.	52	VARD, INC.	
CRANE CO.	63	Agency—Caston, Inc.		Agency—Caston, Inc.	
Agency—The Burton Co.		WALLACE TUBE CO.	133	WALLACE TUBE CO.	
CRESCENT CO., INC.	141	Agency—Palm & Patterson, Inc.		Agency—Palm & Patterson, Inc.	
Agency—Atkin-Kynett Co.		WARNER & SWASEY CO.	14	WARNER & SWASEY CO.	
CUMMING ENGINE CO.	58-59	Agency—The Griswold-Eshleman Co.		Agency—The Griswold-Eshleman Co.	
Agency—Needham, Louis & Brorby, Inc.		WEBER BROS. METAL WORKS	114	WEBER BROS. METAL WORKS	
DESIGNERS FOR INDUSTRY	70	Agency—Robertson, Buckley & Gotsch, Inc.		Agency—Robertson, Buckley & Gotsch, Inc.	
Agency—Fuller, Smith & Ross, Inc.		WEBSTER-CHICAGO CORP.	116	WEBSTER-CHICAGO CORP.	
DIAMOND POWER SPECIALTY CORP.	122	Agency—Bennett Adv., Inc.		Agency—Fuller, Smith & Ross, Inc.	
Agency—Witte & Burden		WEBSTER ELECTRIC CO.	132	WEBSTER ELECTRIC CO.	
THE DOALL CO.	56	Agency—Reincke, Meyer & Finn, Inc.		Agency—Reincke, Meyer & Finn, Inc.	
Agency—Russell T. Gray, Inc.		WELLMAN ENGINEERING CO.	129	WELLMAN ENGINEERING CO.	
F. W. DODGE CORP.	164	Agency—The Griswold-Eshleman Co.		Agency—The Griswold-Eshleman Co.	
Agency—Albert Frank-Guenther Law, Inc.		WHEELING CORRUGATING CO.	10	WHEELING CORRUGATING CO.	
DOH CHEMICAL CO.	149	Agency—Cunningham & Walsh, Inc.		Agency—Cunningham & Walsh, Inc.	
Agency—MacManus, John & Adams, Inc.		WHITING CORP.	118-119	WHITING CORP.	
THOMAS EMERY'S SONS, INC.	156	Agency—Wadde & Briggs, Inc.		Agency—Wadde & Briggs, Inc.	
Agency—Rutherford & Ryan, Inc.					
EMHART MFG. CO.	6-7				
Agency—The Charles Brunelle Co.					

Looking Ahead

As the world's biggest exporter and importer, the United States is the biggest single influence in determining economic ups and downs among our allies. But the more we expand, the more we will be leaning on the rest of the free world. In a special report to executives (page 96), BUSINESS WEEK has attempted to describe what our increased dependence will mean to our trade relations 25 years from now.

This special report is based on the premise that the American economy will continue to grow at its present rate of expansion. To keep up our industrial pace, we will need a huge increase in imports of raw materials. And to maintain a high level of business activity, we will have to sell much more, not only at home, but in markets abroad.

But this won't come about automatically. It cannot be attained without scrapping the hodgepodge of emergency or outdated measures that now passes for our foreign economic policy. True, there must be far-reaching changes throughout the rest of the free world, but our dominant position makes us primarily responsible for creating the conditions conducive to world prosperity.

Moreover, our vital strategic objectives demand a new approach. As Atomic Energy Commissioner Thomas E. Murray made clear in announcing the building of an atomic power plant, the U.S. depends on substantial uranium supplies from friendly nations.

Our foreign trade position is currently being studied by the Randall commission. Under the joint directive of Congress and the President, this group has been given a free hand to recommend a complete overhaul of our foreign economic program. This means it has a unique opportunity to plan a comprehensive policy geared to our future as well as our immediate needs. As BUSINESS WEEK'S report makes clear, world stability, and our own prosperity, depend upon it.

Limiting Competition

Free play for supply and demand usually is regarded as the core of competition. There are other ways to compete, to be sure, but flexible prices are inherent in the idea. And few will disagree that competition is the sharpest spur in our system.

Nevertheless, it is human to erect defenses against unpleasant surprises. Thus you see a national advertiser buying space to tell the consumer that the Supreme Court's decision not to review "fair trade" protects him against "the law of the jungle."

You encounter different and far more delicate problems when industries bolster their arguments against price cutting with conservation of natural resources. Front and center on the politico-business stage you see petroleum and agriculture.

Farming, after a decade of unprecedented prosperity, has been plagued by declining prices. The human tendency is to seek price protection.

Cold logic might dictate that the government should retract price supports to a point where they afford only disaster protection. This would have two advantages: (1) It would abolish incentives to "produce for the government," and (2) it would let consumer preference, as revealed in prices, tell the farmer what and how much to plant.

That, in the circumstances, may be too severe. It certainly would place the big, efficient farmer at an advantage over the many marginal producers.

Any way you look at it, though, the advantages of leaving some of the decision to the marketplace (rather than relying on Washington-enforced rigidities) must be remembered. The consumer counts, too.

From the heart of the corn belt comes the complaint of V. Lewis Bassie, director of the University of Illinois' bureau of economic and business research, who feels that present farm policy provides an incentive for peak output while restricting consumption (by setting aside the laws of supply and demand). The consumer, Bassie insists, pays twice—once in taxes to support farm prices and again in high food bills.

In oil, the action to restrain competition comes not from the federal but from a state government. And the protest comes not from an academic economist but from an oil man.

The greatest "stabilizer" in petroleum supply is the fixing of production quotas, principally by the State of Texas. Granting that petroleum supplies are not inexhaustible and that conservation is commendable, there still must be the argument that lower prices might prove at least as good a conservation.

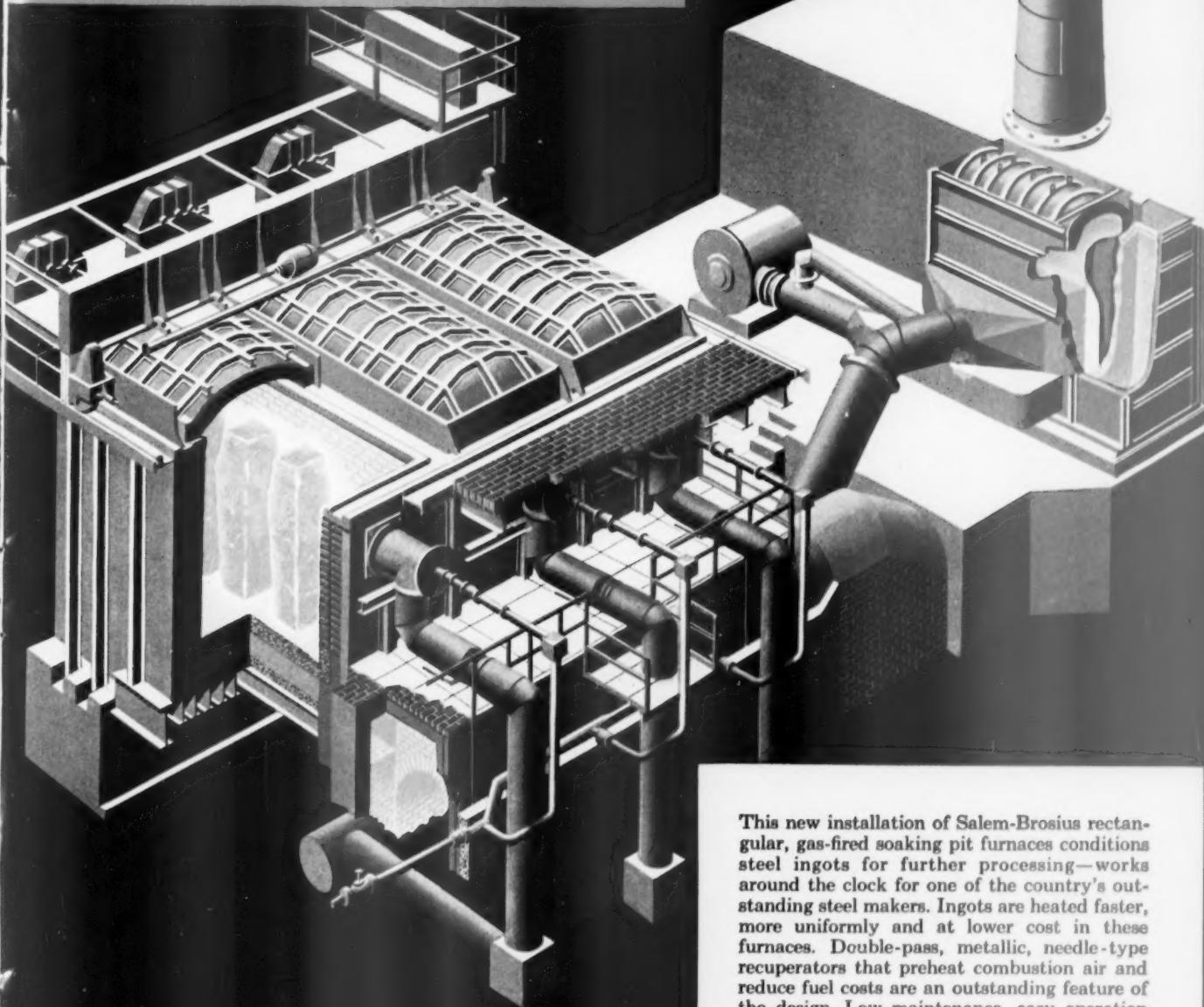
Allowable production was cut back sharply a year ago when oversupply of petroleum products threatened. Prices, generally, were maintained.

Not long ago, crude oil prices were raised for the first time since 1950. The boost unquestionably was justified by increased production costs. But its timing was surprising in that the action came toward the close of the big gasoline-consuming season and in the face of piled-high stocks of petroleum and petroleum products.

That price increase—with its spreading effects on product prices—has not seemed to be holding too robustly. It probably could not have held at all had it not been for three successive monthly slashes in Texas production quotas.

In the midst of these developments, you hear Robert G. Dunlop, president of Sun Oil Co., argue that price cuts would be the best way to bring supply and demand into balance. "We know from experience," he told the Petroleum Club of the Cleveland Chamber of Commerce, "that a lowering of price levels . . . is effective in inducing people to purchase more gasoline and other oil products than they would otherwise buy."

Making heat perform better is a Salem-Brosius specialty



This new installation of Salem-Brosius rectangular, gas-fired soaking pit furnaces conditions steel ingots for further processing—works around the clock for one of the country's outstanding steel makers. Ingots are heated faster, more uniformly and at lower cost in these furnaces. Double-pass, metallic, needle-type recuperators that preheat combustion air and reduce fuel costs are an outstanding feature of the design. Low maintenance, easy operation and long service life are standard with Salem-Brosius designed furnaces.

Salem-Brosius engineers are specialists in performance and control of heat in manufacturing, offering furnaces custom-built to your requirements. Salem-Brosius furnaces assure you maximum high-quality output at minimum initial, operating, and service costs.

We would like to tell you more about the efficiency of these new units, and also about the well-known Salem-Brosius circular soaking pits.

If your modernization or expansion plans call for heating or heat treating furnaces of any kind, furnace charging or forging manipulation equipment, valves, or hot materials handling machinery; write, wire, or phone Salem-Brosius!

SALEM-BROSIUS, INC.

SALES AND EXECUTIVE OFFICES:
248 FOURTH AVENUE, PITTSBURGH 22, PA.



HART SCHAFFNER & MARX

DOW

PFLUEGER
A Great Name in Tackle

WESTERN UNION

maidenform

GILBERT

LUCIEN LELONG

COLT

ROYAL

Pillsbury
BEST
XXXX
Mills, Inc.

Brunswick

BULOVA

Mercury
RECORDS

FRUEHAUF
TRAILERS

BAYER
ASPIRIN

LOF
GLASS

STEWART
SW
WARNER

Talon
THE QUALITY ZIPPER

3M
COMPANY

AUTO-LITE
MEANS PRECISION
MANUFACTURING

Bell & Howell

Bunte
WORLD FAMOUS CANDIES

CHICAGO
MILWAUKEE
ST. PAUL
AND
PACIFIC

BIGELOW
Rugs - Carpets

Working for the
"first families" of
American business

Burroughs Sensimatic

Accounting Machines

Among the leaders of American business, Burroughs Sensimatic accounting machines have convincingly demonstrated their speed and efficiency. In handling practically every type of accounting operation, they have proved so simple to run that even beginners quickly do expert work. This Sensimatic versatility and operating economy is increasingly vital today because of the constantly growing demand for accounting information. For all the facts, call the Burroughs branch office near you. Burroughs Corporation, Detroit 32.

